CARANA CORPORATION

Providing Global Development Solutions

USAID MALI TRADE DEVELOPMENT PROGRAM STUDY

FINAL REPORT

Contract # PCE-I-00-98-00014-00
Task Order # 812

December 10, 2002

Prepared by CARANA Corporation and Abt Associates

TABLE OF CONTENTS

ANNEXES

ACRONYMS

AGOA	African Growth Opportunities Act
APCAM	Assemblée Permanente des Chambres d'Agriculture du Mali
ASA	Agriculture Sector Assessment
BCEAO	Banque Centrale des Etats de l'Afrique de l'Ouest
BNDA	Banque Nationale de Développement Agricole
CAE	Centre Agro-Entreprises
CET	Common External Tariff
CILSS	Centre International de Lutte Contre la Sécheresse
CMDT	Compagnie Malienne de Développement de Textiles
CNPI	Centre National pour la Promotion des Investissements
COBAS	Cooperative des Marchands de Bétail de Sikasso
CONOESAM	Coordination Nationale des Opérateurs Economiques du Secteur Agro-Alimentaire
DAD	Delta Agricultural development Project
DGRC	Direction Générale de la Réglementation et du Contrôle
DNAMR	Direction Nationale de l'Appui au Monde Rurale
ECOFIL	Programme Economie des Filières
ECOWAS	Economic Community of West African States
FEBEVIM	La Federation des Groupements Interprofessionnels du Bétail et de la Viande
FEWS	Famine Early Warning System
GDP	Gross Domestic Product
GOM	Government of Mali
IER	Institut d'Economie Rurale
IF	WTO Integrated Framework
IR	Intermediate Result
MDRE	Ministry of Rural Development and the Environment
MFI	Micro-finance institution
MTS	Multilateral Trade System
NTB	Non-tariff barrier
OECD	Organization for Economic Development and Cooperation
OHADA	Organization pour l'Harmonisation en Afrique du Droit des Affaires
OHVN	Office de Développement de la Haute Valley du Niger
OMA	Observatoire du Marche Agricole
OMBEVI	Office Malienne du Bétail et de la Viande
ON	Office du Niger
PACCEM	Project d'Appui a la Commercialisation des Cereals au Mali
PASIDMA	Projet d'Appui du Système d'Information du Marche Agricole
ROESAO	Réseau des Opérateurs Economiques du Secteur Agro-Alimentaire De l'Afrique de l'Ouest
SEG	Sustainable Economic Growth
SFD	Société Financière Décentralisée
SIM	Systèmes d'Information du Marche

SO	Strategic Objective
TRADE	Trade for African Development Project
USAID	U. S. Agency for International Development
WAEMU	West Africa Economic and Monetary Union
WAEN	West Africa Enterprise Network
WARP	West Africa Regional Project
WTO	World Trade Organization

I. INTRODUCTION

Mali is one of the poorest countries in the world with an annual per capita income of about $250. However, after decades of stagnation the economy appears poised for a period of sustained growth and poverty alleviation. Beginning in the early 1980s, the Malian Government implemented a set of policy reforms that liberalized the economy and gradually brought the country into the global market. As a result, the Malian economy was able to respond impressively to the devaluation of the CFA franc in 1994 and the resulting increased competitiveness of Malian products. Since then, Mali's GDP growth has averaged 5.7 percent per year, with exports growing by 12.8 percent per year, led by gold and cotton, Mali's two largest exports.

Poverty in Mali, however, remains pervasive. Using World Health Organization (WHO) calorie intake standards, the Malian Government estimates that 65 percent of Malians live below the poverty line, with one fifth living in extreme poverty. The problem is concentrated in the rural areas where 71 percent of the population lives below the poverty line, compared to 31 percent in urban areas.

The Malian Government has the ambitious goal of reducing the incidence of poverty to 47 percent by 2006. The USAID Agriculture Sector Assessment (ASA) demonstrates clearly that this will only be achieved through rapid agricultural growth.[1] Increased agricultural production results in increased agricultural incomes, which generates demand for non-farm products produced and sold in rural areas, thus creating rural off-farm employment. The ASA shows that it is through increased off-farm employment that the greatest impact on reducing poverty is achieved.

The ASA proposes a sustained annual agricultural growth rate of 5.1 percent over the USAID ten-year strategy period. This compares to a 4.2 percent annual growth rate between 1995 and 2000, a period of economic recovery that benefited from the CFA franc devaluation and exceptionally good weather conditions. As we look to the future, most of the demand for this increased agricultural production will be within Mali, but there is no question that the target cannot be achieved unless there is sustained rapid growth in agricultural exports.

USAID will be contributing to Mali's poverty reduction program through its Sustained Economic Growth (SEG) Strategic Objective (SO). The SEG program will have three elements (intermediate results): increased agricultural production, increased trade in agricultural products, and increased financing for agriculture. This report deals with the second of those elements: increased trade in agricultural products. Rapidly growing regional and global markets for products in which Mali has a comparative advantage, combined with high production potential for those products, makes it possible for Mali to experience exceptional growth in agricultural exports over the next ten years. For this rapid growth to be achieved, however, significant constraints to increased trade and investment must be addressed. Part II discusses opportunities and challenges in the sub-sectors offering the greatest potential, and Part III discusses the far reaching changes that must take place before self-sustaining trade-led growth can occur in Mali.

[1] Tyner et al, Chapter 3.

II. ASSESSMENT OF KEY SUBSECTORS

Overview

The official export statistics for the years 1998 to 2000 are summarized in Table 1:

Table 1: Exports by major commodity group, 1998-2000 (billions CFA francs)						
Category	**1998**		**1999**		**2000**	
	Amount	Percent	Amount	Percent	Amount	Percent
Gold	133.1	40.2%	142.4	40.5%	189.4	50.0%
Cotton fiber	147.8	44.6%	150.1	42.7%	110	29.1%
Other cotton products	2.8	0.8%	2.8	0.8%	2.9	0.8%
Livestock	28.1	8.5%	33	9.4%	44.3	11.7%
Hides and leathers	3.2	1.0%	3.4	1.0%	4.5	1.2%
Fish	1	0.3%	1	0.3%	1	0.3%
Other	15.1	4.6%	18.9	5.4%	26.4	7.0%
Total	331.1	100.0%	351.6	100.0%	378.5	100.0%

Source: BCEAO as reported in IMF, 2002.

Actual exports are somewhat higher than what is presented in this table because much of Mali's trade within the West African region is in the informal sector and is unrecorded. However, this table provides useful orders of magnitude. It will be noted that cotton accounts for about 60 percent of non-gold exports, and livestock accounts for about two thirds of exports excluding gold and cotton. Cotton is exported on the global market whereas most of Mali's other agricultural exports go to neighboring West African markets.

The cotton and livestock subsectors are clearly the key to Mali achieving its overall agricultural export growth targets. The ASA projects a sustained seven percent annual growth rate for cotton, which can be achieved by increasing the area planted, but will require the restructuring the cotton monopoly, Compagnie Malienne de Développement des Textiles (CMDT), to increase its efficiency and global competitiveness. Livestock exports have been growing slowly after experiencing a spurt following the devaluation in 1994. As will be discussed later in this section, productivity of the Malian livestock sub-sector is currently very low, but conditions appear to be in place for significant increases in productivity and exports over the next five to ten years. Mali currently has a slight deficit in food crops, mainly in cereals, but also including fruits and vegetables. There is considerable cross border trade in coarse grains, all in the informal sector, but on balance Mali is a net cereal importer, importing rice from the world market and maize from Burkina Faso and Cote d'Ivoire.

Future growth in exports depends on market trends and production potential. On the market side, there is the huge European market, which imports many of the products that Mali is capable of producing, but is also highly competitive. There is also the West African regional market, which is obviously much smaller, but has traditionally absorbed

most of Mali's non-cotton agricultural exports. The European market will continue to offer enticing possibilities, but Mali's overall competitive situation in that market is not likely to change much over USAID's ten-year strategy period. However, as can be seen from Table 2, important changes are occurring in the regional market. Population growth, increased agricultural productivity and increasing industrialization are resulting in a rapidly growing urban population and increasing per capita incomes. Demographic projections show that the coastal countries of West Africa will become more than 50 percent urban within the next few years. The region is already a very large net importer of cereals, meat, and fruits and vegetables and will certainly become more so in the coming years. There will, of course, be tremendous competition for supplying this large and growing market, both from global suppliers as well as from other countries in the region. The various actions Mali will need to take to be competitive in this market will also be discussed later in this section.

It should be noted that there is serious political unrest in the region, which could significantly affect its economic performance during USAID's ten-year strategy period. In addition to the ongoing unrest in Liberia and Sierra Leone, there are the more recent developments in Cote d'Ivoire, by far Mali's largest economic partner in the region. Cote d'Ivoire's high level of development relative to the rest of the region is due in large part to the political stability of the 1960s, 1970s and 1980s, and this political stability, not only in Cote d'Ivoire but also throughout the region, is essential for Mali to achieve its economic and export growth targets.

Table 2: Population and Gross Domestic Product in West African Countries

Country	Population (millions)	Urban Population (percent)	GDP ($ bill.)	GDP per capita ($)	GDP Growth Rate (%) (1991-2001)
Benin	6.4	43	2.4	380	4.9
Burkina Faso	11.6	17	2.4	210	5.1
Cote d'Ivoire	16.4	43	10.3	630	3.3
Ghana	19.7	36	5.7	290	4.2
Guinea	7.6	28	3.1	410	4.3
Guinea Bissau	1.2	32	0.2	160	0.7
Liberia	3.2	45	n.a.	n.a.	n.a.
Mali	11.1	31	2.5	230	4.3
Mauritania	2.8	59	1.0	350	4.3
Niger	11.2	21	2.0	180	3.0
Senegal	9.8	48	4.7	480	4.3
Sierra Leone	5.1	37	0.7	130	-4.3
Togo	4.7	34	1.3	270	2.7
Sub-total	114.8	33	36.3	325	3.9
Nigeria	130.0	45	37.1	290	2.4
Total	244.8	39.4	73.4	304	3.1

Source: World Bank, Country at a Glance Tables, October 2002.

On the production side there are significant opportunities in rice, maize, livestock and horticulture, where economically viable technical packages are available to increase productivity and production. This is already happening with rice and maize. Since 1995, rice production has been increasing by nine percent and, until the recent drop associated with disruptions in the cotton sub-sector, maize was growing by ten percent per year. It is mainly by building on this momentum that Mali will achieve sustained rapid growth in agricultural exports. As will be discussed later in this section, the irrigation investments needed to increase rice production also provide an opportunity to increase the production of high quality fruits and vegetables for export, some possibly for the global markets, and the increased maize production can lead to increased coarse grain exports within the region and increased availability of animal feed, which is critical to increasing livestock exports.

Coarse Grains

Production Potential

For the last fifteen years, cereal production growth in Mali has averaged 3.6 percent per year, compared to a population growth rate of 2.5 percent, with virtually all of the growth accounted for by rice and maize. Prospects for rice production will be discussed later in this section. In Mali, maize is grown primarily in rotation with cotton. Not only are the growing conditions in this region favorable for a high yielding maize technical package, but maize producers also benefit from CMDT cotton support services, including fertilizer, animal traction and credit. This CMDT support is critical for the continued rapid growth in maize production.

Experience during the recent disruptions in the cotton sub-sector demonstrates that there is considerable substitution between cotton and maize production, despite CMDT's efforts to have the two crops grown in rotation. This indicates that liberalization of the cotton sub-sector could have a positive effect on maize production. If cotton prices were allowed to move with world prices and these prices were announced to farmers early enough, in years of low world prices farmers would choose to grow maize. This would tend to increase maize production relative to cotton. Recent experience has also shown that farmers will apply fertilizer on maize if maize prices are high enough. This emphasizes the need to assure a continued supply of fertilizers to these farmers under a liberalized cotton regime.

Export Potential

The regional market for coarse grains is well integrated with substantial flows in all directions. As a result of the sustained rapid growth in rice and maize production over the last fifteen years, Mali now tends to export slightly more than it imports. FEWS estimates that, so far this year, Mali has exported 166,000 tons of millet, sorghum and maize to neighboring countries. If past trends continue, coarse grain prices will continue their downward trend, with maize prices probably dropping more rapidly than millet or

sorghum. Regional market signals will determine which grains will move to which markets, but increased exports of all grains appear likely.

Maize also has export potential as a component in a quality, balanced livestock feed, for which demand is growing throughout the region. However, before this can happen, maize production must increase enough to drive prices down during the dry season when feed demand is highest. At prices that currently prevail during that season, it is not economic to feed maize to livestock. As discussed in more detail later in this section, this point is also the key to sustained high levels of livestock exports. If maize is to make a significant contribution to livestock exports at current red meat prices in coastal countries, maize production must increase enough to drive down coarse grain prices so that it is at least economic to feed maize to breeding stock during the dry season.

Overall, if current production trends continue, it appears inevitable that Mali will become a major exporter of coarse grains to the region. The key is to maintain the rapid growth rate in maize production. Regional trade channels are well established and are essentially an extension of domestic markets. The problems facing export trade are the same as for the domestic market, with some additional problems related to cross border trade and payment transfers.

Trade Issues

The trade issues affecting coarse grain exports are generally related to helping the markets function more efficiently.

- There is a need to increase prices at harvest and reduce prices at other times of the year. A number of measures are needed to achieve this objective, including expanded farm-level storage and increased credit from micro-finance institutions (MFI) to finance the storage operations. In the maize producing area, it was found that, when farmers are paid for their cotton before maize and sorghum are harvested, they meet their immediate cash needs with the cotton income and store their cereals for sale later in the season. Forward sales of grain stored at the farm level are another way of achieving the same result.
- Domestic and regional trade is financed by wholesale traders using their own resources. The larger, well-established traders are able to obtain bank credit to finance some operations, although they must use assets other than grain stocks as collateral. A way should be found to use these large traders to channel credit to smaller, less well-established traders, thereby improving cereal trade flows in the domestic market.
- The regional trade has the additional difficulty of payment transfers. Traders deal with this by making their own arrangements the best they can. They see it as unlikely that banks will play any significant role in facilitating payment transfers in the foreseeable future. With the large quantities moving across regional borders, a regional approach to improving banking services for trade would yield substantial financial benefits to cereal traders.
- Some regional export markets require assured quality standards, a requirement that is totally lacking in the domestic market. The USAID-funded Centre Agro-

Entreprise (CAE) has been working with cereal traders to address this issue. At some point it should be addressed nationally at the policy level. Trade associations should be involved.

- The market information system for cereals is more developed than for any other commodity, but there is still a need for improved information at the regional level. This will require a regional support project for the national market information organizations (SIMs) in the region.
- As with all other commodities, regional cereal exporters must deal with road barriers and accompanying illicit taxes, which substantially increases their marketing costs. This also can only be addressed at the regional level, although, given the large cereal volumes being traded, cereal exporters should be able to bring about some improvements by coordinating their efforts.

Livestock

Production Potential

According to the most recent statistics available from OMBEVI and other sources, livestock exports have more than doubled from their pre-devaluation levels. Over this period controlled slaughter (virtually all for domestic consumption) has risen by over 20% for cattle and over 40% for small ruminants. Data presented in Annex A show that that the cattle herd has been growing by about three percent per year, and for small ruminants, the rate is 5 percent per year. At these growth rates, herd size is growing faster than population, but not by enough to maintain current export levels in the face of rising incomes in Mali and constant prices for red meat and poultry (Metzel, 1997).

The case for exports of livestock from Mali lies elsewhere than in past trends in ruminant production and offtake. It lies in past trends in cereals and cotton production and emerging trends in intensive poultry production that, taken together, should reduce feed costs, increase feed availability, stimulate intensive poultry meat production and consumption, increase offtake and average weight gain of ruminants and, consequently, increase exports of ruminants and traditional poultry.

As discussed above, cereals prices in Mali appear to be on the verge of secular decline as domestic supply of cereals begins satisfying domestic demand. Lower cereals prices will make it cheaper to provide supplemental feed to ruminants, will reduce the opportunity cost of producing forage, and will provide a stronger market impetus for livestock feeding operations than that which now exists. With the export market for red meat expected to be able to absorb, at current market prices, virtually any amount of exports Mali can provide over the next ten years under the current WAEMU Common External Tariff (CET), livestock feeding represents the best opportunity for increasing livestock exports, for expanding linkages between the cereals and livestock sub-sectors, and for increasing farmer and consumer incomes.

Recent studies (Metzal et al, 1998 and Diarra, 1997) suggest that that finishing of ruminants, large and small, is a profitable enterprise for many of Mali's farmers,

especially if they are undertaken by small producers who benefit most from manure, who have access to on-farm by-products and quality feeds, and who are provided some guidance on the amounts of feed supplements to use. It is also profitable for the economy as a whole, as indicated by the domestic resource costs (DRC) calculated by Diarra (1997): .65 for the larger and .46 for the smaller cattle operations, and .19 for small ruminants. It will become even more profitable if cereal prices decline in the face of stable prices for live animals.

The Emerging Role of Poultry

Intensive poultry production will be a key element in this transformation of the agricultural sector. Poultry provides the most efficient biological mechanism for transforming cereals into meat. There are now dozens of former civil servants, many with training in agriculture and livestock, and dozens of others engaged in poultry operations of 5000 birds or more. Most of these are laying operations, but intensive broiler production is increasing rapidly with support from PDAM, an aviculture development project financed by the Arab Bank for African Economic Development.

Although there is little reliable data on intensive poultry production available in Mali, the numbers are clearly miniscule in comparison to the coastal countries. Broiler chick imports have doubled each year for the past two years under PDAM, but still totaled only 132,000 birds 2001. Laying chick and fertilized egg imports have grown over 30% per year over the same period, suggesting a current national improved laying flock of around 700,000 birds.

There is now enough momentum to warrant optimism that productive capacity in the poultry sub-sector can respond to market opportunities as they develop. Intensive poultry production is important for promoting exports not because of its own potential for export, but because of its potential for freeing up red meat for export. With lower cereals prices, intensive poultry production will put downward pressure on prices for cattle and small ruminants. The more elastic demand for red meat in the coastal countries will keep the price from falling there, maintaining the incentive for traders to divert local production to these export markets and restraining the decline in domestic prices for red meat. USAID may want to revisit its activities and indicators for IR 1 under the SEG SO to reflect this potential for intensive poultry production.

Export Opportunities

Mali's main trading partner for livestock exports has traditionally been Cote d'Ivoire. Cote d'Ivoire imports about 145,000 head of cattle and 200,000 head of sheep and goats each year, not all of which are from Mali (FAOSTAT). According to Diakate (c2001), Cote d'Ivoire accounted for 83% of Mali's official cattle exports of 129,000 head in 1999. Burkina Faso took 12% and Senegal 4%. Unofficial exports probably followed the same pattern. According to livestock traders, these percentages are changing dramatically in 2002 as increased harassment and political unrest in Cote d'Ivoire has diverted more exports to Senegal and Guinea. Guinea is the portal to Sierra Leone, which imported

25,000 head of cattle in 1999, and Liberia. According to FAOSTAT, Senegal imported 10,000 head of cattle and 380,000 head of small ruminants in 1999.

The key issue for export markets for Mali's livestock is one of price rather than effective demand. Because all of the coastal countries are important importers of meat, market prices are set by world prices, in conjunction with the common external tariff of 20% and the response of individual countries to world market prices. At the present time Mali benefits from both the West Africa Economic and Monetary Union (WAEMU) common external tariff (CET) and countervailing duties imposed on subsidized meat imports from Europe by Cote d'Ivoire and Senegal. This translates into a floor price for Mali's live meat exports to those same countries that is considerably above current world market prices. This floor price is currently above the cost of adding a kilo of meat to ruminants, both large and small, via seasonal finishing operations, though not those using grain-based feed rations at cereal prices prevailing this year.

It is not just a reduction in effective protection that presents a potential problem for livestock exports from Mali. The coastal countries that are importing Mali's animals are not standing still with their livestock production programs either. The case of Cote d'Ivoire is indicative. De Troyes (1997) shows that production of meat in Cote d'Ivoire more than doubled between 1975 and 1995, amounting to 53% of national meat consumption. At the same time, red meat consumption was declining, falling from 9.1 kg. per person in 1980 to 7.2 kg in 1990 and 4.9 kg in 1995, following devaluation, even as urbanization proceeded apace (Wyeth, 1997).

These numbers show that Cote d'Ivoire was able to increase meat production at well above the rate of population growth (4.3% for meat versus 2.3% for population), while reducing total meat consumption. Still, imported meat represented 47% of total meat consumption in 1995. Rising incomes and urbanization will limit the Ivoirian Government's ability to restrain demand for meat much further. Therefore, it seems unlikely that demand for Mali livestock by Cote d'Ivoire will change appreciably from the current situation, unless there is a significant reduction in import duties. Without doing a similar country-by-country analysis, it seems reasonable to assume that Mali's other trading partners find themselves in similar situations.

Issues Related to the Supply of Animal Feed

Sustained growth in exports requires sustained growth in herd size and offtake. Mali needs to develop a more efficient and responsive live animal supply by strengthening input processing technology, input supply markets and input quality on the one hand, and animal production technology, management and marketing on the other. Feed is a critical component in this process because it has a direct impact on ovulation and the ability of ruminants to achieve maximum reproductive potential. Feed is also critical for animal finishing operations and for the growing poultry industry. Improving the availability, quality and cost of feed is a *sine qua non* for sustained growth in Mali's livestock exports. Otherwise increased local demand for red meat is expected to absorb available supply before USAID's next Strategic Plan is complete (Metzel et al., 1997)

- *Poor Quality Feed*

The animal feed industry is very fragmented and underdeveloped in Mali. One part consists of firms that sell animal feed more as a way to market by-products than to provide the kind of supplements needed by specific livestock operations. The other part consists of small, multi-purpose mills where feed producers provide basic milling services for the preparation of rations according to feed formulations provided by the client, in most cases, poultry producers.

The Grand Moulin du Mali, one of the larger providers of livestock feed, uses rice and wheat bran as available, sometimes using only wheat bean, without changing the label on the sack. Sometimes the company has nothing at all to sell. HUICOMA, a subsidiary of CMDT and the largest producer of livestock feed in Mali, uses large amounts of cottonseed cake in its feeds, mainly because it obtains the cake via an administrative quota at a price well below world market prices. This encourages overuse of a very valuable commodity in its feeds.

Poor technology for mixing feeds presents an ongoing problem for producing quality feeds from the many small-scale mixing operations spread throughout the country. Also, many producers blend their own feed, even though they don't have the kind of equipment needed to ensure good distribution of micronutrients nor the kind of knowledge to adapt their rations to changes in market prices and product availability and still maintain a quality ration at minimum cost. This reduces value-added from the feed as compared to a more balanced or more appropriate mix.

There seems to be considerable scope for the preparation of well-mixed concentrates that are designed to be combined with specific by-products and cereals available locally in different parts of the country for feeding to ruminants. These concentrates could be mixed with the locally available energy sources, either by smaller feed mills or by farmers directly, or used to supplement locally available lower quality feedstuffs. This would produce considerable savings in transportation costs for the bulk of the ration. Helping to develop prototype products of this sort would be a good way for the CAE to promote exports of both livestock feed and animals.

- *Unreliable Feed Supplies*

Inadequate storage for feed components limits the supply of feeds at certain times of the year, as agricultural by-products have to compete with cereals for available storage during the harvest season. Increasing production of wheat and forage on irrigated land during the dry season may provide a partial solution to this problem in the short run, until use of grain instead of only by-products becomes financially profitable for feed producers. Increasing the availability of financing for the feed stock inventories of feed producers would also help.

Many feed producers do not have the capital to be able to stock up on feed components at harvest time when prices are lower, in order to maintain a more stable price for their feeds. If the price of cereals increases sharply between harvest and the main feeding season, the price of feed increases similarly. This creates problems for producers since it is difficult to put animals on and off feed at will; it significantly increases risk and raises costs. Blended rations do not store as well as the component feedstuffs, so this is not a problem that livestock producers can solve very well on their own. The solution is to increase financing available to feed operators so they can lock up supplies at harvest and provide a reliable supply throughout the year that is not too volatile in price.

Next Steps in Supporting Increased Livestock Trade

As previously noted in this section, the key next steps for increasing livestock exports are on the production side. This includes maize production, animal feed production, animal finishing operations, and intensive poultry production. These IR-1 issues are discussed in detail in the Livestock and Coarse Grains Annexes to this report. This section deals with export constraints specific to the livestock sub-sector:

- Develop a more efficient and responsive live animal supply sector by strengthening feed processing technology, feed supply markets and feed quality on the one hand, and animal production technology, management and marketing on the other.

- Continue to provide support to feed mills regarding composition of rations, appropriate technology, the setting up of contracts with producer associations for forward delivery of feed components, proper analysis, packaging and labeling of composite feeds, marketing, and providing extension support for their customers.

- Support the development of border livestock markets at key export points. Markets to include: paddocks and pasture for holding stock; water; supplemental feed sources; veterinary, inspection and customs services required for exports; shelter for traders; and vehicle repair services - all on a fee for service basis oriented toward full private sector support for all but government services.

- Support the development of a freight clearing exchange (bourse de fret) to arrange back haul loads for trucks exporting agricultural goods from Mali. This is particularly important during the cotton marketing season.

- Assist trade associations oriented toward export trade to become: a viable exchange for regional and international commodity transactions; an effective lobbyist for the goals of association members; a source of guarantee for completion of contracts accepted by members through the association; a source of market intelligence for its members; and a force to be reckoned with by government officials misusing their powers.

In addition, livestock exports suffer from the same constraints as other products being exported to regional markets, including but not limited to: illicit taxes, cumbersome and unreliable payment transfer procedures, the lack of market information, the inappropriate application of commercial laws, and the lack of financing. These are discussed later in this report in the section on crosscutting issues.

Rice

Advances in production and technology combined with a favorable regional demand situation have led to a comparative advantage for Malian rice in the sub-region. There is thus basis for believing that the rice sub-sector can be turned into an export-driven engine of development for the Malian economy. Mali exports a variety of agricultural products in varying quantities to nearly all of the countries with which it shares borders. However, the demand for rice in neighboring countries in the region is enormous. Several of Mali's neighbors already import quantities of rice from the international market ranging from 180,000 tons in Ghana to nearly 750,000 tons in Senegal. This deficit can be expected to grow rapidly with population growth, urbanization and increasing per capita incomes.

Production Potential

The performance of the rice subsector over the last ten years has been impressive. Production has soared from 280,000 tons to 727,000 tons. There are at least five or six distinct production systems operating in Mali, but it is the fully controlled irrigation system of the Office du Niger (ON) zone that has been the basis for most of the production increases in the last ten years and which offers the best potential for export expansion. It accounts for about 17 percent of rice land cultivated and 40 percent of total production. Yields of milled rice are around four tons per hectare compared to two tons in the rest of the country.

Domestic consumption of rice is growing almost as fast as production. Indeed, Mali still experiences periodic deficits in overall cereals production. Official imports of cereals to Mali have exceeded exports by an average of 58,000 MT per year over the last six years, most of which has been rice. In many cases, these rice imports are part of a complicated regional flow of cereals in response to market signals, with imported rice substituting for domestically produced rice exported to neighboring countries. Senegal and Mauritania are the chief regional destinations for Malian rice. However, DRC analyses have shown that the productivity increases in irrigated rice production have made exports of Malian rice competitive in nearly all of the regional West African markets.

In order for Mali to exploit this comparative advantage and become a net exporter, it will need to double production in the ON again over the next ten years, in addition to maintaining the rate of growth of rice production in other production systems. This will require considerable increases in investment in production capacity in the ON. The Government's current rice sector development policy limits public investment in the ON to the extension and rehabilitation of the primary irrigation infrastructure. The entire cost of extending and rehabilitating the secondary and tertiary infrastructure is to be paid by

private investors. These costs are estimated to be around $3500 per hectare (Stryker & Coulibaly, 2001).

Even with no public investment in the extension of the present primary irrigation infrastructure, it would be possible to double the current cultivated surface in the ON if investors could be found to develop the necessary secondary and tertiary infrastructures. Approximately 6,000 hectares per year would have to be developed. Combined with consistent growth of around 4% per year in the rest of the sector, this would result in a national production of around 1.5 million tons of rice per year. Even assuming a normal population growth rate and an increasing rate of domestic rice consumption, at least 250,000 – 300,000 tons per year could be available for export. As noted above, this is only a fraction of the likely regional deficit at the end of USAID's ten-year strategy period.

The volume of private investment required would be on the order of $15 million to $20 million per year. Creating an environment that will provide the incentives for private sector investors to undertake this level of investment will require significant changes in a number of areas.

- Natural Resource Management, especially as it applies to land-use planning. Forms of land tenure that provide the appropriate conditions to invest in irrigated production in the ON will have to be developed and promoted.
- Decentralized Financial Services. More appropriate financial mechanisms that can address the problems of raising capital for private investment in rice production, cross-border trade, and value added activities, especially milling, will have to be developed.
- Privatization of ON management. The ON must be able to offer private investors fiscal and financial concessions, more secure (private title) forms of land ownership, term-sensitive financial services, and a generally investor-friendly environment. A privatized ON management will have the motivation and capability to create favorable conditions for investors.

This list of required changes highlights the cross-linkages among the three Intermediate Results under the Sustained Economic Growth Strategic Objective: increased production, increased trade, and increased financing. Not only will the ON have to become more effective in increasing rice production through increased private investment, it will have to address the credit constraint for producers and will have to introduce an enhanced export orientation at all levels, from ON management itself, to small and large producers, to rice millers and traders. If rice exports are to become an engine of growth for Mali, increased exports will have to be one of the ON's ten-year strategic goals. Under IR-2, USAID's role will be to provide enterprise development and enabling environment support, addressing needs from the farm gate to the final markets.

Constraints to Increased Exports

Export enterprises invariably cite financing as their principal constraint, while banks insist that few trade-oriented ventures are financed because of a lack of bankable projects. Indeed, trade-related financing in Mali is almost exclusively for imports. This is both because there are almost no export oriented financial institutions and because exporters typically operate in the informal sector, and thus have little experience in seeking bank financing. This constraint is likely to become more important with increases in the volume and quality requirements of Mali's rice exports. Business development services will be needed that can assist enterprises to use financing as one step in the capital formation process, and also assist banks to manage risk in loaning capital to export enterprises.

Most small enterprises like those involved in rice trade in Mali experience critical management shortcomings. Most are family enterprises and many trader association members are semi-literate. Training and internal capacity building services will permit them to operate their businesses more efficiently and respond more quickly to opportunities as they present themselves in the regional market.

Most of the actual cross-border trade in rice and other cereals takes place in the informal sector. Harassment of traders and transporters by police and local authorities is pervasive in West Africa. Besides slowing down the movement of goods from source to markets, these activities represent illicit taxes that raise the cost of doing business and impact ultimately on the overall volume of trade. USAID has had some success in working with the government of Mali in reducing the importance of these internal barriers. However, exporters find these barriers even more difficult to deal with once they have crossed a national border.

Many of the regulatory, judicial and administrative changes that have accompanied the formation of WAEMU are unknown to exporters. Small enterprises, especially, often lack access to information on the regulatory environment in which they must operate. The current situation in Cote d'Ivoire gives rise to the question of what forms of protection or recourse exporters can expect should their goods be caught up in a situation of civil unrest. Efforts need to be made to enable governments and regional organizations to disseminate this kind of information more effectively to enterprises engaged in cross-border trade.

Mali has the most efficient market information system in the region. Traders agree that it generally delivers useful price and market information in a timely manner. A beginning has been made to strengthen the links among the various market information systems in West Africa through the PASIDMA project. It is absolutely necessary to continue to reinforce and integrate the capacities of these institutions on a regional level.

Quality and scale issues increase in importance as enterprises respond to export markets. While the current producer-owned, micro-scale rice milling operations have allowed producers to capture a larger share of the value-added, they may be inappropriate for the

quantities and quality standards required in trade expansion. These small mills produce generally low quality rice with a significant percentage of brokens and containing impurities. Responding to the quality expectations of middle-income coastal consumers will require modifications in the processing and handling of the product. As investments in large-scale paddy production proceed, parallel investments in larger scale milling capacity will need to be made. Indeed, continued rapid growth in the rice sector aimed at exports and spearheaded by private investment will likely lead to a significant level of vertical integration among production, processing and marketing activities. This will require a major enterprise development activity, which USAID, because of its past efforts in Mali, is particularly well positioned to undertake.

Fruits, Vegetables and Alternative Crops

The Existing Situation

Mali produces a wide variety of fruits and vegetables for the domestic market. The main production areas are:

- The Office du Niger (ON) in the Ségou Region, where the main crop is shallots.
- The Dogon Plateau in the Mopti Region, also a major shallot growing area.
- The Sikasso Region (the cotton zone), where a wide variety of vegetables are grown in *bas fonds*. The region is also a major mango growing area.
- The Bamako basin, including the Baguineda Irrigated Perimeter, where the main crop is tomatoes, and the Haute Valley du Niger, where a wide variety of horticultural crops are grown, mostly under hand irrigation or in *bas fonds*.

With at least 90 percent of fruits and vegetables being produced for the domestic market, Mali's fruit and vegetable sub-sector is defined by the low purchasing power of Malian households. Most fruits and vegetables are sold and consumed soon after harvest when there are gluts on the market and prices are at their lowest. The production-marketing chain, which is almost entirely in the informal sector, has the following characteristics:

- Quality is low due mainly to poor harvesting and post-harvest handling techniques.
- Poor post-harvest handling and lack of appropriate storage also results in high losses, probably exceeding 50 percent of total production.
- Because fruits and vegetables are highly perishable, the lack of appropriate storage results in a short marketing season, market gluts and low prices.
- Because the large majority of Malian households are unable to pay higher prices, there is no incentive to improve post harvest handling and storage, which would lengthen the marketing season but also increase prices beyond what many households would be willing to pay.
- This underdeveloped marketing system generates none of the value added that could come from more selective harvesting practices, improved storage and post harvest handling, and better niche marketing.

The existing regional export market is essentially an extension of the domestic market. The same products that are sold domestically also move across national borders to

neighboring countries, and the consumers are also the same – low-income West African households. Consequently, the characteristics of the market are the same: low quality products, high waste, low prices and short marketing season.

Over the past twenty years, there have been numerous efforts by donors and other development organizations, notably OHVN, ON and CMDT, to improve on this situation, with some localized successes, but no real change in the overall system. The main reason for the limited success is that the small and highly demanding market willing to pay for high quality was competing with the large existing market paying lower prices but willing to accept lower quality. In the end, the incentives for improving quality and reliability were inadequate to induce Malian producers to make the transition from the broad-based but undeveloped production and marketing system described above to the more structured and management-intensive system required to produce and market consistently high quality products at internationally competitive prices. As long as this continues to be the case, sustained rapid growth in fruit and vegetable exports will not be possible.

Prospects for the Future

As we look to the next ten years, the fruit and vegetable sub-sector will continue to be dominated by the low-income domestic market with some of the production continuing to flow across national borders to other low-income consumers in the region. However, there is also a large and rapidly growing regional middle-income urban market. The urban population in the coastal countries is due to exceed 50 percent of the total population in the next few years and per capita incomes are projected to increase as a result of increased agricultural productivity and industrialization. This will be a highly competitive market. The region is already a large importer for fruits and vegetables from efficient global suppliers (mainly Europe and South Africa) who will be aggressive in maintaining and increasing their share of this growing market. With the right strategy, however, Mali can compete successfully with these suppliers in selected products.

Experience with past fruit and vegetable export promotion projects has shown that, for Mali to succeed in the regional middle-income market, Malian producers must be provided with reasonably priced and, more important, dependable markets for the products that will be consumed by these quality conscious households. This market can only be provided by exporting enterprises, whose responsibility it is to establish strong backward linkages to the producers and forward linkages to the markets. The effort to increase exports must be focused on strengthening these enterprises and assisting them in establishing the necessary backward and forward linkages. It is not possible to predict in advance which products and which markets will be most important for Mali -- these will be determined by the markets -- but a good place to start is with those products that are already being produced in the largest quantities. These are: mangoes, shallots, potatoes and shea nuts. Relatively small percentage increases in these large volume products will have more of an impact on total exports than large percentage increases in miniscule volume products, and are often easier to achieve. Assessing the prospects for each of

these four products provides a good indication of Mali's export opportunities and challenges in the fruit and vegetable sub-sector.[2]

Mangoes. Mangoes are a major crop in Mali. The country produces about 100,000 tons of exportable varieties: Kent (30,000 tons), Keitt (25,000 tons), and Amélie (45,000 tons). Very little data is available on how this crop is marketed, but recent studies have estimated that about one third is consumed locally, one third is lost through poor harvest practices and one third is exportable (Yiriwa Conseil). About 1,000 tons are exported directly to Europe and a much larger quantity is exported to Cote d'Ivoire and re-exported to Europe by sea. Malian exports to Europe have been declining steadily since 1991, at a time when this large market has been experiencing very rapid growth. Small quantities are exported through the informal sector to regional markets in Cote d'Ivoire, Senegal and Mauritania.

Mali clearly has a large exportable surplus of mangoes. The major obstacle to increased exports is the inability to supply mangoes of consistently high quality. There is a lack of coordination at the producer level and very weak links between the producers and the markets. There is a mango producer cooperative (COPROMANG) and two fruit and vegetable exporter associations (AMELEF and APELEF), but these organizations are weak and have no influence over quality standards or reliability of supply. The challenge is to find some way to export a larger percentage of Mali's 30,000-ton exportable surplus. It is clear from recent trends that this must be a long-term effort. Continued efforts may slow or even reverse the downward trend in exports to Europe, but it is unrealistic to expect that this market will absorb a major portion of the surplus.

The effort must therefore be in the regional market and the targets should be ambitious, for example annual exports of 20,000 tons at the end of ten years. Given Mali's large surplus production, processing possibilities also need to be explored. The task is to analyze the market and develop a comprehensive program to build up the mango export industry over a ten-year period. The basic work has already been done by numerous development projects, including the CAE. All of the constraints from production to final market have been identified and analyzed but, by and large, have not been addressed. The reason, as noted above, is that the incentives for improving quality and consistency at the producer level have been inadequate, and the solution is for exporting enterprises to develop the market and create the producer links that will generate the necessary incentives. The approach needs to be strategic and long-term

[2] Several useful studies of the highly varied and complex fruit and vegetable sub-sector have recently been carried out. The most comprehensive is Volume III of the Etude pour la Promotion des Filières Agro-Industriels, carried out in 2000 for CAE by Yiriwa Conseil. In addition, the Agriculture Sector Assessment, carried out in 2001 for USAID by Abt Associates, and Mali Trade Capacity Needs Assessment – Sub-Sector Analysis, (draft not for citation) carried out by Nathan Associates for the AID Africa Bureau provide excellent summaries of the overall situation and issues related to many specific commodities. The following summary assessments are based largely on information presented in these studies. These studies also include detailed assessments of other lower volume products, some of which have export potential. The combined exportable surpluses of all of these minor products, however, do not equal the exportable surplus of even one of the four products discussed in this section.

Shallots. Shallots are an important secondary crop for Mali. Production, which has increased from 73,000 tons in 1997 to 110,000 tons in 1999, is concentrated in the Office du Niger and the Dogon Plateau. Eighty percent of the production is marketed, mostly to domestic markets, with a well-established trading system from the production areas to the major cities. A small, unrecorded percentage of production, probably less than ten percent, is exported to regional markets, mainly Cote d'Ivoire. The problems facing shallot production and marketing are the same as for other vegetables. In its fresh state, the product is perishable and experiences large losses as a result of poor storage and post harvest handling. The quality of the product suffers from poor harvesting practices. It should be noted that drying techniques have been developed that allow shallots to be marketed over a relatively extended period. These dried shallots are highly appreciated by Malian households, for their taste as well as their long shelf life. There is a large market for fresh onions in the coastal countries. Dutch onions supply most of this market in summer and fall at a quality and price that cannot be matched by regional suppliers. In the spring, the Niger Galmi onion supplies a large portion of this market.

The large regional market and the large production potential in Mali make shallots a good target of opportunity for increased exports. The 10,000 tons currently being exported for the low-income market will continue to grow along with population. The next step is to supply the middle-income urban market with higher quality, better preserved shallots. An ambitious but achievable goal might be 10,000 tons to this market by the end of the ten-year strategy period. Once again, the key is the exporting enterprise. Producers will not make the additional effort and incur the additional costs necessary to produce export-quality fresh shallots unless they are adequately remunerated and are assured a steady market year after year. Any disruptions in this market will send them back to the low price, but also low cost and dependable domestic market. The growing production and domestic consumption of dried shallots provides a promising base for increased exports. The quality of this product is already appreciated by Malian households and could find a lucrative market in the coastal countries. Exporting enterprises will have to be strengthened, first to define the market and assess profitability and second to develop the production links and technical knowledge necessary to supply that market. The process of creating this new industry will require the long-term commitment of government, donors, and the private sector.

Potatoes. With production at 50,000 tons, Mali is the second largest producer of potatoes in West Africa, following Nigeria with 109,000 tons, and well ahead of third place Senegal with 6,500 tons. The region as a whole imports 34,000 tons, mainly from Europe and South Africa (Yiriwa Conseil). According to the FAO, Mali's regional exports have been rising steadily from 1,800 tons in 1995 to 4,000 tons in 1999. Potato production and marketing suffers from the same problems as other vegetables: low quality and high losses resulting mainly from poor harvest practices and post-harvest handling. A major production constraint is the lack of high quality, competitively priced seed potatoes. Seed potatoes can be imported more cheaply than they can be grown in Mali, but at the present time there is only one major importer, which is the main reason for the low quality and high prices. It will be very difficult for Mali to compete with Europe and South Africa on price and quality, but recent studies have shown that with improved production,

harvesting and post-harvest practices, and more knowledgeable exporting enterprises, Mali could capture one third of this growing market. This could mean exports of 15,000 tons by the end of the ten-year strategic period.

Shea nuts. Mali is reported to have two-thirds of the world's shea nut trees (Tyner *et al*). Production estimates range between 80,000 and 250,000 tons, making shea nuts one of Mali's highest volume crops. Shea nuts are an oilseed used in cooking, soap, cosmetics, pharmaceuticals and chocolates. There is a strong regional and global demand for shea nuts and shea butter, but Mali's exports are low and declining. The problem is low quality. The trees grow wild, and gathering is a very time consuming activity carried out exclusively by women. More than fifty percent of production remains unharvested, and the drying practices used in Mali produce a low quality nut that is not valued either in the region or in the global markets. The reason that more nuts are not harvested and that better drying practices are not used is that the compensation is inadequate to justify the time required. This is a product that has both regional and global export potential. The first step is to improve harvesting and drying techniques. This means finding a way to motivate the producers to adopt the more labor intensive improved practices. As in the case of the previous three products, the key is in identifying a profitable market and taking all of the steps necessary to meet the quality and supply requirements of that market.[3] Once again, the onus will fall on the exporting enterprise and development efforts must focus on strengthening these enterprises as needed.

A note on the global markets. Over the past twenty years, a large number of development projects have attempted to increase Mali's horticultural exports to global markets, mainly Europe. Although some of these projects achieved limited success, overall they have had no measurable impact on aggregate export earnings. They have not succeeded in creating an engine of growth for Mali as many had hoped. However, many lessons were learned, which can be used to continue the effort at a level commensurate with likely benefits.[4] The most important lesson is that Mali does not possess the vertically integrated export infrastructure needed to compete successfully in this large and lucrative market. Donors, government, regional development authorities, and private sector firms now know what is needed to create that vertical integration, from on-farm production practices all the way to the final market.

The private sector will have to take the lead, especially foreign investors who know the markets and can put in place appropriate practices in production, harvesting, post harvest handling, processing, and quality control. A key part of becoming competitive in this market, however, is outside of private sector control. For private investors, Mali is accurately seen as an expensive and risky country in which to do business. This is due to poor physical infrastructure, the lack of trade-related supporting services, the lack of technical and managerial skills needed to produce for the European market, and the

[3] Burkina Faso has succeeded in improving the quality of its shea nuts by aggressively developing market channels that have made improved, but labor intensive, gathering, drying and handling techniques financially feasible, with the result that their exports of nuts and butter have been increasing.

[4] One possible new approach would be to explore the organic market for products the country is already producing, notably potatoes and shallots.

absence of a well functioning legal and judicial system. This relatively unattractive business climate is mainly due to Mali's low level of development, not to any anti-business or anti-foreign investment bias on the part of the Government, which means that many of the constraints to increased global exports will only be overcome as the economy grows and develops. This will happen much more rapidly if Mali's tiny landlocked economy can become part of a fully integrated rapidly growing West African regional economy.

Conclusion

Productivity increases occurring in the cereals sub-sector, mainly in rice and maize, are already creating the conditions for rapid growth in cereal and livestock exports to the West African region. The momentum is less strong for fruits and vegetables, but with the right strategy, moderate growth on a smaller scale can occur there as well. There is clearly a large regional and global market for products Mali can produce, Mali has the potential to increase its production of those products, and the technical packages exist for Mali to be competitive in these markets. Overall, the key to increasing the rate of growth in exports will be the interface between the producers and the exporting enterprises. There are two sets of issues. One is the strength of the exporting enterprises. The trading system in Mali is currently made up of small informal sector firms that have neither the resources nor the technical and managerial capacity to tap the fastest growing quality conscious export markets. In all of the sub-sectors, exporting enterprises must be strengthened through increased private investment and the introduction of managerial and technical expertise. The process essentially involves moving enterprises from the informal to the formal sector. USAID can help this process by providing the full range of business development services to exporting enterprises, along the lines of the existing CAE project.

The second set of issues has to do with the enabling environment for increased trade and investment. Even if exporting enterprises are strengthened, they will not survive if they can't compete. It is clear from the sub-sector analyses that current enabling environment severely constrains increases in investment and trade. On the investment side, the main issues are: the unreliable and expensive physical infrastructure, the malfunctioning legal and regulatory system for business and commerce, an inadequate government incentive program for domestic and foreign investment, and the shortage of technical and managerial skills in the Malian labor force. On the trade side, some of the most important the issues are: weak regional integration, including the many obstacles to the intra-regional movement of goods; the lack of trade-related infrastructure, especially storage and treatment facilities, transport, and a cold chain from the production areas to the markets, airports and seaports; and the lack of trade-related supporting services, including, but not limited to, bank services, market information services, and quality control services (grades and standards, labeling, phytosanitary inspections and enforcement). The combined effect of these weaknesses is to increase the cost of doing business in Mali thereby reducing the country's competitiveness in regional and world markets.

These two sets of issues are closely interrelated. Enterprise development efforts will result in some investment and some increases in exports, but sustained rapid export growth at the national level can only come from an improved enabling environment. Improving the enabling environment will increase Mali's competitiveness, and private investment for export will increase, nationwide and in all sub-sectors, in response to the improved market conditions. Significant improvements in the trade and investment-enabling environment can only occur gradually over the long term because most of the problems are directly linked to Mali's very low level of economic development. The process, however, can be significantly accelerated with the right vision, the right strategy, and the right set of interventions, as is discussed in the next section.

III. CROSS-CUTTING TRADE AND INVESTMENT ISSUES

Studies over two decades have identified a daunting list of impediments to trade and investment in Mali. These obstacles range from major social issues of education and health to labor costs and physical infrastructure. In the midst of this array of concerns, USAID/Mali's ambition to build a trade development program must be selective and strategic. It must focus on two sets of issues: those that lie within its manageable interest to affect through direct intervention, and those that it can influence through regional coordination and policy dialogue. In all cases, the SEG Team must have before it specific and verifiable outcomes.

Trade Issues Susceptible to Direct Intervention

In order to promote increased exports of the agricultural products proposed in this study, USAID/Mali will need to become directly involved with customs operations, commercial law application, overland transport, export financing, and market information. Each of these areas offers opportunities for specific interventions within the reasonable manageable interest of SEG.

Customs Operations

A competent, efficient, and transparent customs service lies at the core of success for USAID/Mali's trade promotion efforts. The Government of Mali must ensure that its Customs Authority understand the policies of the regional and global trade organizations of which it is a member. The Government must also provide incentives to ensure that its customs service implements these rules and procedures.

Mali's customs authority cries out for assistance in areas ranging from physical infrastructure to computer hardware to training in risk analysis. USAID/Mali is not, however, a major partner of this agency and as such can address only a few targeted areas. The issues described below represent areas of potential intervention that correspond to the SEG trade development program. The order presented is not necessarily one of priority.

- *Pre-shipment inspection*

Mali requires that all import shipments valued over 1.5 million CFAF - about US$2,300 - be inspected for quality and quantity. The argument that the annual cost of the service, estimated at US$5 million, is amply compensated by revenues which would otherwise be lost through under-invoicing is only valid in the absence of analysis and alternatives.

SEG should challenge pre-shipment inspection whenever it has an opportunity to do so. The intermediate objective should be a gradual diminishing in the required percentage of inspections; the final objective is total elimination of the service in favor of full local capacity to achieve the Government's desired ends.

Pre-shipment inspection will resist confrontation: The service is written into Mali's commercial code and it serves a clear purpose, even though it may not serve it as well or cost-effectively as generally supposed. It has two negative consequences: by raising the costs of imported intermediate goods, it has an inherent anti-export bias. Second, it out-sources to a foreign private firm technical capacity that should be developed in-house.

USAID's regional Trade for African Development (TRADE) project, working through WARP, will be well positioned to raise the issue of pre-shipment inspection in broad policy dialogues. SEG should manifest its concern to WARP, as well as to the Cutting Hunger in Africa Project, providing specific information on pre-shipment inspection costs and possible options, which include modifying the present contract for gradual phase-out and, concomitantly, training customs agents in valuation and risk analysis.

Pre-shipment inspection is further discussed in Annex D.

- *Port-to-destination transport*

By ECOWAS agreement, national chambers of commerce bond shipment of goods against illegal delivery for the purpose of evasion of taxes and duties. The charge is normally 0.5% *ad valorem*, a cost that international customs experts consider excessive by world standards. The arrangement is punitive to the landlocked countries. To make matters worse, anecdotal evidence suggests that the service is ineffective.

The desired outcome of change in this instance is an alternative that lessens costs and provides more effective service.

Because the issue is regional, in-transit bonding will naturally fall into the portfolio of The Competitiveness Hub under WARP. Since Mali, however, is probably more victim than beneficiary of the present system, and since—at least theoretically—the bonding will raise the cost of Mali's overland exports, as well as its imports, the matter is also of local concern. While SEG will not have the means directly to change the system, it should be a strong advocate for its improvement. SEG can exert its influence by conducting analyses of the cost-benefit for Mali and ensuring that the conclusions are disseminated, heard, and acted upon. It can encourage its own partners to understand the subject and to raise it when appropriate. It should offer alternatives, such as differentiating between high and low-risk transporters. SEG should collaborate proactively with WARP on this issue.

- *Implementation of agreed duties under WAEMU*

The duties concerned are both the CET and intra-regional tariffs.

As of January 1, 2000, all WAEMU countries agreed to implement the CET, which contains four categories of duties ranging from zero to 20%, and they agreed to free circulation of many goods among member states under specific rules of origin. The

establishment of WAEMU as a true customs union should be recognized, for all its present shortcomings, as a major step towards integration into the multilateral trading system. The U.S. has strongly supported this unification, and USAID must be a major partner in seeing that it is consolidated and expanded. These steps can only occur in the measure in which all member states respect their mutual agreements, and the foremost of these are the internal and external tariffs. There is disconcerting evidence that the tariff rates are often incorrectly applied, and traders report a tendency among customs to revert to the former national systems, indicating a lack of understanding of, and possibly commitment to, the new rates on the part of the member states.

SEG can actively contribute to implementation of the agreed duties in a highly focused way. All team members should know the category of tariff relevant to their clients' principal imports from global trading partners, and they should know the WAEMU internal duties for both imports and exports. Furthermore, knowledge is power. In a region where knowledge is often not disseminated for that very reason, SEG can help ensure that all parties to the trading system understand that access to tariff rates is intended to be easy and universal. While the information is available on the Internet, SEG can also help ensure widespread availability of tariff lines in print. Through its work with autonomous agencies such as the CNPI and with trade associations and business networks, SEG should push the agenda of transparency.

USAID/Mali will want to maintain continual communication with WARP and regional activities such as TRADE and the Cutting Hunger in Africa Initiative on tariffs and their implementation. WAEMU remains a relatively weak organization, mainly because of the lack of commitment of many of its members, with the result that the economic integration of the region is moving very slowly. Rapid regional integration will not happen until WAEMU receives more power and authority from its member states.

Commercial Law

In 1998 fifteen French-speaking countries plus Guinea-Bissau completed and adopted new commercial legislation known as OHADA—l'Organisation de l'Harmonisation du Droit des Affaires en Afrique. A *tour de force* for the continent, the OHADA legislation is achieving in commercial law what WAEMU and other customs unions achieve for international trade: an acceptance of unified standards. Thus far, five texts (*les actes uniformes*) have been completed, the foremost treating of general commercial law. OHADA legislation is the law of the land in the signatory countries. Wherever a conflict arises between national law and OHADA, the latter prevails.

Another piece of legislation of great importance to Mali is the uniform investment code (*Le Code Communautaire d'Investissements*) of WAEMU. Still under review as a draft (*avant-projet)*, the investment code when adopted will go a step further towards creating a single legislative *and* economic space, since countries will no longer be able to compete for investment through escalating offers of incentives.

The advantages of OHADA and the uniform investment code to Mali and to the region are considerable. As investment is the counterpart to trade, the laws governing the establishment of companies and commercial exchanges require understanding and support. The effective implementation of OHADA legislation and the adoption of a modern, liberal uniform investment code are worthy development objectives.

The SEG Team should focus on the two aspects of dissemination and implementation of OHADA. Although acknowledged as the law throughout the judicial system of Mali, the legislation is too little known and too seldom applied. As with tariffs and customs, knowledge is power, and SEG must ensure a high level of awareness of OHADA among its partners and stakeholders. Through them, and acting at first in instances of specific concern or controversy, SEG will perform a service of inestimable importance by heightening awareness and knowledge of the law. Simple distribution of the texts can be a starting point. Since SEG will offer various forms of capacity building for trade, it will be able to incorporate relevant aspects of OHADA into its training and workshops. SEG will also use recourse to OHADA when needed to support its enterprise development component.

Overland Merchandise Transport

Malian traders effect cross-border export of goods in three ways: informal walking and small vehicle transport, especially of livestock (transhumance), truck, and rail. Inadequate physical infrastructure, poor telecommunications, lack of cold chain facilities, and many other factors raise the cost of overland transport. Where USAID/Mali, through the SEG Team, can make a sensible and near-term difference is in challenging illegitimate rent seeking and harassment of traders and transporters.

The ultimate objective of any intervention in this area is the elimination of illegal taxes on transported goods.

Trade data cited in Annexes A and B indicate a trend towards formalization of cross-border commerce in livestock and grains. Merchants move into the formal sector when the benefits of so doing outweigh the costs, but illegal and informal taxation impede progress towards formalization, and they are real, everyday problems for regional traders. The realities of harassment and illegal taxation have been thoroughly documented in Mali and throughout WAEMU. CILSS has recently created an *observatoire*, an office to witness, document, and report these incidents. The West African Enterprise Network—a formal network of ECOWAS business people—claims also to have founded an observatory, but it may be the same one as CILSS'.

Because the phenomenon of illegitimate taxation of transporters is both local and regional, SEG will work directly in Mali towards improvement and eventual elimination of the problem. First, it should study and abet the reasons that lie behind the recent preference for formal trade. Then it should work with WARP, CILSS, and WAEN as agents of change in the region. SEG's first step will be to look closely at the CILSS effort. How, for example, does CILSS intend for documentation to cause change? Why

bother to document what is already known to and acknowledged by the authorities? What is the scope of observation? Is the proposed funding and staffing excessive? Will the function be programmed to vanish if and when the problems are resolved, or will it become an office in need of perpetual funding?

Should SEG choose not to support the CILSS' proposal, it must find its own way of challenging the status quo. There is nothing new or unique about the issues, and governments throughout the world have found enduring solutions. SEG cannot ignore the issue or leave it to others, because illegal road harassment raises the cost of trade, flouts the letter and spirit of global and regional trade agreements, creates non-tariff barriers, perpetuates corruption, and diverts intellectual resources from constructive activities.

Export Financing

Exporters of agricultural products generally suffer from the same constraint as other small and medium sized enterprises: a lack of diversified financial services. While importers are able to access short-term credit relatively easily, the availability of appropriate financial products for agricultural exports is limited.

The Malian banking system has evolved considerably in the last 10 – 15 years, with the development of a dynamic micro-finance sector. Commercial banks are quite conservative in their credit policies, preferring loans to businesses involved in retail, wholesale and commercial import of consumer goods. These loans typically have a quick turnaround (3 months). The National Agricultural Development Bank (BNDA) is the only financial institution involved in production credits, and even these are limited to cotton (80 percent) and rice (20 percent). It has little or no involvement in the financing of downstream activities such as marketing and processing.

Micro-Finance Institutions (*Structures de Financement Décentralises*, MFI/SFD) have evolved from the rural mutual savings and loan movement. Their primary role is in savings mobilization. This fast-growing sector has filled some of the gaps in financing for small-scale businesses involved in agricultural marketing and processing enterprises. Some of these MFIs have federated into larger entities known as Apex Organizations, which operate more or less as local banks. These Apex Organizations have taken over much of the financing of agricultural production credits in areas like the Office du Niger and the CMDT zone. However, MFIs are subject to regulatory restrictions, which severely limit their non-savings and loan activities.

Putting in place the appropriate mechanisms for export financing is an area where IR-2 and IR-3 interface. Many of the interventions being proposed under IR-3 address financial constraints identified in this report. For the purposes of a Trade Development Program under IR-2, the following financial services issues should be addressed:

- Expansion of the role of MFIs and other SFDs in financing agricultural enterprises, including the evolution of apex organizations into local private banks;

increased mix of products available; and the decentralization of loan management expertise.

- The development of new products and approaches geared to exporting and export service enterprises, including: guarantee funds; forward sales contracts; lines of credit; capital investment bonds; and export development funds.

Market Information

Market information is crucial to agricultural marketing. It is all the more so when exporting of agricultural products is involved. Mali enjoys a favorable position in this regard, having the most effective market information system (SIM) in the West Africa region. The Observatoire du Marche Agricole (OMA) collects farmgate, wholesale and retail price information on a wide variety of products from locations all over the country. This information is sorted and broadcast by local radio stations using local media contracts (Contrats de diffusion). The information is forwarded to the national OMA office for further analysis. OMA produces weekly and monthly situation reports and special bulletins on outlook, market volume and export prospects.

OMA enjoys profound support from its users. This is partially reflected in the fact that the Government of Mali has allocated a budget line of 100 million fCFA (+/- $140,000) to support OMA's operating expenses. Equipment costs and overhead are supported by donors, led by USAID. The Decentralized Agricultural Market Information Support Project (Projet d'Appui au Système d'Information Décentralisée sur le Marche Agricole – PASIDMA) has been assisting OMA to reduce operating costs and ease its dependence on donor funding. Increasingly, PASIDMA and OMA have been responding to a demand from users for better information on the regional market outlook and export opportunities. While SIMs exist in all of the other West African countries with which Malian traders do business, they are not as well organized as OMA. PASIDMA has begun to work with these also, organizing regional market outlook conferences.

As the various MIS agencies in the region have moved closer to a kind of regional market information clearinghouse, trader organizations have become increasingly involved with them. The Malian traders' organization, CONOESAM, and its regional counterpart, ROESAO, meet regularly with PASIDMA and OMA to assess the information available and to suggest new kinds of information that will be useful to exporters: demand for certain products, consignments available, etc. The traders' organizations, while relatively underdeveloped at present, represent a significant opportunity to create a decentralized forum for conflict resolution and arbitration of cross-border trade disputes.

The existence of a regional market information superstructure, loosely allied with a nascent regional traders' advocacy network, provides an ideal focal point for continued improvements in the market information activities which are vital to increasing regional international trade. The PASIDMA support activities need to be continued, expanded to the regional level and intensified. Information collected needs to be more quickly and more widely diffused. The broadcast contracts approach used in Mali needs to be systematically spread to the neighboring states. Innovative solutions to the regional

market information problem also need to be explored. USAID could, for instance, assess the possibility of a weekly market information broadcast in short wave on the VOA. Establishment and promotion of the use of the Internet to diffuse market information should also be given high priority.

Regional and Global Trade Issues

While each of the crosscutting trade-related issues discussed in the previous section embraces important regional considerations, each also has an important Malian local focus for SEG intervention. The matters described below are primarily regional or global, and may not necessarily require any direct intervention from USAID/Mali.

Energy, Telecommunications and Transport

Mali's undeveloped infrastructure is a major reason for its lack of competitiveness in global markets. Within Mali, the Government needs a transportation policy that has clear priorities and is oriented toward meeting the needs of a growing agriculture-based economy. For rail and air, the key is to put in place a set of policies that encourages investments that have positive internal rates of return and are self-financing over the long-term. From the standpoint of the agriculture sector, the focus needs to be on roads - from agricultural feeder roads to major highways linking Mali with the rest of the region. In addition to investments in the road system, there is a need to take a new look at taxes on transport. The ASA notes that official taxes account for 22 percent of total transport costs, and illicit taxes add another seven to ten percent. The issue of transport taxes is, of course, closely linked to the overall problem of public finance in Mali. Even if these taxes cannot be significantly reduced, there needs to be a direct link between the revenues they generate and government expenditures on road maintenance and improvements.

Mali's energy costs compromise its competitiveness in manufacturing and, hence, attractiveness for foreign direct investment. These costs will have direct implications for SEG wherever processing, cold storage or handling requires electrical power; but USAID/Mali will have little or no means in its programs to effect change in this area. Experts have estimated, nonetheless, that Mali could reduce its energy costs by half if it imports power from the region. As a member of the West African Power Pool (WAPP), Mali is looking into ways for doing this. It will require liberalizing its energy policies, and the full realization of any such project is at least a few years away. SEG should urge WARP to seek involvement in the energy policy discussions.

USAID has not been involved in the privatization and licensing activities in Mali's telecommunications sector, which is characterized by high costs, low access and unreliable service. Other than encouraging dialogue on economies of scale through regional integration, SEG is unlikely to put any resources into the communications sector.

The World Trade Organization

SEG will face a continual temptation to think of its program as essentially a classic export promotion activity. It must resist this temptation. SEG will become USAID/Mali's right arm for trade, and it will embrace responsibilities broader than export promotion, even though the manifest results it seeks are described in terms of commercial values. SEG must adopt the long view of Mali's steady integration into the multilateral trading system, and even of a leadership role for Mali among its neighbors.

A member of the WTO since its founding, Mali has entered into few commitments. Its preliminary response to the Integrated Framework diagnosis is elementary and naïve, and unlike Burkina Faso, Ivory Coast, and Senegal, Mali is not yet participating in the WTO's Joint Integrated Technical Assistance Program (JITAP).[5] In sum, Mali remains at the very margins of the organization it joined nearly eight years ago.

The SEG Team should gently and wisely push Mali towards increased WTO involvement. This means that the SEG core must cultivate an understanding of WTO for itself; then foster its partners' learning. SEG's inroad to WTO issues will once again emerge from the export and import interests of its beneficiaries. The least developed countries (LDCs) enjoy privileged circumstances within WTO, but they must become more active in the organization to assure that their exonerations are not phased out. LDCs speak more powerfully as groups, and both WAEMU and ECOWAS should develop the capacity to negotiate effectively within WTO. USAID/Mali should work closely with the regional USAID activities, ensuring that Malians participate in seminars and workshops, that officials and private persons receive training clearly related to their functions and their official capacity to cause change.

AGOA

Signed by President Clinton in 2000 and reaffirmed and expanded by the Bush Administration in 2002, the Africa Growth and Opportunity Act is the U.S. counterpart to the EU's Everything But Arms agreement under the Cotonou Accord. AGOA gives some 6,000 products from eligible countries duty-free and quota-free entry to the U.S. market, and Mali is one of the thirty-five eligible countries.

SEG need not make AGOA a priority focus, since the likelihood of Mali's taking advantage of the facility is low. Nonetheless, AGOA is important to USAID and constitutes a major component of the TRADE activity. The SEG Team must know its provisions and be prepared to seize any occasion that arises to take advantage of them. AGOA also offers one more channel for coordination with WARP and other USAID regional offices. The Malian and regional contexts for AGOA are further discussed in Annex D.

[5] Six agencies implement IF activities on behalf of the least developed countries: WTO, UNCTAD, UNDP, The World Bank, the IMF, and the ITC.

Trade-Related Institutions

Mali has several government agencies important to trade: the Ministries of Commerce and Competitiveness, Industry, Finance, and Agriculture, as well as the Central Bank. Just as the Government of Mali has no real national trade strategy, its various agencies boast minimal expertise in the MTS, and they have no central coordinating or steering committee for mainstreaming trade. While building a coherent national trade program lies beyond the scope of its interventions, SEG Team members will play a role in nudging the government towards increasingly enlightened positions in the regional and global theaters. Interacting with offices in each of these organizations, they will have to understand the role of each in respect to international commerce.

Customs

SEG will work with Customs as it does with other agencies—through knowledge of its roles and commitments, through urging it to honor its agreements, and through supporting it as an institution when there are opportunities for training or study tours. Training and study tours must, however, have performance objectives attached to them, and SEG should specify what change it hopes to see from the training and should follow up with assessment of results at individual and organizational levels. Using concerns specific to the export products and import needs of its beneficiaries, SEG should encourage Customs to

- Apply correct external and internal tariffs;
- Adopt the transaction valuation system;
- Diminish the frequency of pre-shipment inspection and use the money saved for training agents;
- Resolve the current in-transit bonding mechanism; and
- Participate in solutions to the illegal taxation problem.

CNPI

The *Centre National pour la Promotions des Investissements* is an institution foreseen in the WAEMU agreements. Despite the importance of its mandate and the competence of its leadership, however, it remains unclear to what extent the foreign direct investment that has come to Mali was facilitated by the CNPI, or to what extent any private capital formation has been the direct work of the center. Its *guichet unique* is inefficient and serves the questionable purpose of pre-approval of investments. The intention of the window is to evaluate and approve or reject applications for benefits under the investment code, but there is no evidence that the center is working to improve procedures—e.g., the archaic and ineffective evaluation of feasibility studies—or to rationalize criteria, e.g., the exclusion of commercial enterprises from investment code benefits. It is also unclear that the CNPI plays any role in encouraging domestic private investment in small enterprises.

The tendency in LDCs has been for investment promotion agencies to prefer control over promotion and to become impediments to rather than facilitators of investment. SEG cannot in the long run afford to ignore the CNPI, and it is probably advisable to seek involvement early. One of the inroads to involvement will be through SEG's interest in stimulating private investment, domestic and foreign, in the Office du Niger. Another will be through involvement with the coming export promotion agency, discussed below.

MALIPEX

Mali's former external trade agency, the CMCE, closed in 1991. Its successor, MALIPEX, has been named but not yet established. The UNDP intends to be the main donor partner behind this institution, and its creation is nearly a certainty. Unfortunately, the history of export promotion agencies in the least developed countries has been no happier than that of their investment promotion counterparts, and MALIPEX will fare better only if the lessons of history are heeded.

USAID enjoys a comparative advantage among donors in rationalizing the operations of institutions, and USAID/Mali should exercise this strength in the measure possible with MALIPEX. The SEG Team can find a seat at the table for discussions about this agency and bring history's wisdom to bear and present needs to light. One possibility will be for SEG to locate a project unit within the CNPI and urge MALIPEX to be an office on an equal organization chart level with the investment promotion department. This would mean that CNPI would become Mali's Trade and Investment Promotion Center, coordinating intimately related functions under a single, and non-competing, roof.

Trade Associations

Voluntary, private, member-based business associations organized for the promotion of commerce in agricultural products represent the most likely avenue for SEG to develop trade capacity in Mali. The salient challenge is for such organizations to do more and better for traders than the traders can do for themselves. To respond to this challenge, SEG should aim high: it should take the challenge to the level of those traders in grain, livestock, meat, and horticultural products who are already successful in their businesses. This counsel may seem to flaunt the development imperative of assisting those most in need. In fact, it will help the emerging traders far better than will efforts to build associations at the lowest common denominator of knowledge. The successful traders have an understanding of networks and practical realities well beyond that of consultants or government officials, and this knowledge is indispensable to success.

Furthermore, even the best traders operate in a system of great limitations, within a status quo that can be both ignorant and inimical to change. Through methodical capacity building linked to and monitored at phased performance benchmarks, SEG will leverage its work with trade associations into a trade development program that reaches far beyond the products it supports. Annex E provides a skeletal framework for trade-related training for associations.

Investment For Trade

The positive relationship between trade liberalization and economic growth has been clearly established for LDCs only when trade is accompanied by increased private investment. Greater private investment will be the handmaiden of exports for real growth and poverty alleviation in Mali. The policy environment for investment in Mali is not inimical, but regulatory realities can prove obstructive. As it strives to foment exports of select agricultural products, USAID/Mali will have to keep an attentive eye on conditions for both local small business creation and foreign direct investment. Annex D illustrates the procedural environment for enterprise establishment and offers more critical analysis.

Small Business Establishment

Mali's commercial code, largely superseded by the OHADA legislation, allows several common forms of societies of persons and of capital. The locus of initial registration procedures is in the Chamber of Commerce and Industry of Mali (CCIM) and its antennae. The CCIM houses a *Centre de Formalités*, which is intended as a one-stop-shop for small business registration. Costs appear reasonable, but procedures are complex and sluggish by contemporary standards.

By following the process of registering and licensing a small enterprise through the efforts of its beneficiaries, SEG will disclose the sources of obstruction. It makes little sense in today's environment for an investor to wait more than a few weeks to have a formal, registered business authorized to trade. Improving process and procedures could be at least an ancillary objective of SEG's support to small enterprise.

Foreign Direct Investment

In the past several years, gold has provoked a surge of foreign direct investment in the mining sector of Mali. Foreign investment in agriculture has remained insignificant and has been low in other sectors as well. The list of factors discouraging foreign direct investment in Mali does not warrant repetition here. No factor is insurmountable. Of greater weight than poor transport infrastructure or other physical circumstance is political will as reflected in law and implementation.

Mali's policy environment for foreign direct investment is reasonable but tepid: Capital movement is free—but not quite. Investors are welcome but subject to a lengthy approval process. Foreign-owned firms may operate in Mali but only after receiving their *agrément*, or authorization. Fiscal exonerations and capital repatriation guarantees are available but contingent upon approbation of feasibility studies—and then only for industry. Furthermore, the French exception—under OHADA law French physical and juridical persons are treated as local nationals—adds a curious twist to the environment.

SEG will want to encourage positive foreign investment in Mali. It could easily arise from non-traditional countries, e.g. India or Thailand. Working with the CNPI,

corresponding with WARP in regards to OHADA and the WAEMU investment code, SEG may well have occasion to follow the process of foreign investment up close. In order to do so effectively, it should understand the issues in advance, and work for their improvement wherever possible.

IV. THE TRADE DEVELOPMENT PROGRAM

Because of the productivity increases that are already underway in the Malian economy, it can be expected that GDP will grow faster than population over the ten-years of the USAID strategy. This will alleviate poverty somewhat but will not lift the country out of the ranks of the least developed. Sustained GDP growth of two percent above population growth will result in a per capita income of $410 at the end of 25 years. To grow faster than that, the Malian economy will eventually have to be pulled by trade into the global economy. Mali's goal needs to be to reduce the gap between its level of development and that of the rest of the world. This will be achieved through trade. During a first phase, the Malian economy should be pulled into faster growth by increased trade with the rest of the West Africa region. This will require increased productivity in Mali and the breaking down of trade barriers within the region. The second phase, which is much more important over the long term, is for the region to be pulled into faster growth by increased trade with the rest of the world. Both the gap between Mali and the rest of the region and between the region and the rest of the world must be reduced. Mali should be aiming for a per capita GDP of $1,000 at the end of 25 years, not $410.

The integration of Mali into the regional economy and of the region into the global economy, however, will not be enough. For the development gaps to close, investment must flow into the region and into Mali. Without investment, even with integration, trade will not grow, and what trade there is will tend to move into primary products, which as a group, have been facing declining terms of trade for decades. Investment brings increased productivity and competitiveness, without which trade cannot grow.

Mali, of course, is only one small country and is therefore limited in what it can do to bring about all of the conditions necessary for increased trade and investment. However, only Mali can look out for its own interests. The country, therefore, must be a driving force pushing for increased trade between itself and the rest of the region and between the region and the rest of the world. Within this context, what can or should USAID do to help? What comes out of Parts II and III of this report is that USAID should provide assistance at two levels:

- Create an improved policy and institutional environment for increased trade and investment; and
- Provide direct product-focused assistance to increase exports in key economic sub-sectors.

Improving the Policy and Institutional Environment

Creating the right policy and institutional environment for increased trade and investment has three dimensions: increased regional integration; the effective and consistent application of commercial laws; and a more proactive stance for Mali in the global trade arena. As discussed in Part III above, USAID can play a critical role in each of these areas.

Increased Regional Integration

The complete economic integration of the West African region is vital to Mali's long-term growth and development. Although the monetary union is well established under the BCEAO the customs union, WAEMU, is just getting started. WAEMU is a very weak organization, mainly due to a long-standing lack of commitment on the part of its member states. The Common External Tariff is a major breakthrough, but many of the provisions are poorly understood by the implementing national institutions and therefore unevenly applied. It is important that Mali commit itself fully to implementing WAEMU provisions in its customs and other trade-related operations. For the sake of its own economic future, Mali must also be a leading force pushing for a stronger WAEMU organization and for a stronger political commitment to economic integration on the part of all of its member states. It should be noted that ECOWAS is proceeding in parallel with WAEMU, but is far less along in terms of signed agreements and the stated common purpose of its members. For Mali, at least for the next five years, its regional integration objectives can be achieved most effectively by focusing its efforts on WAEMU.

Regional economic integration is so vital to Mali's long-term growth and development that one of USAID primary objectives in Mali should be to assist the Government in implementing customs union provisions and becoming more active in promoting regional integration within WAEMU. USAID should provide training and institution building, and should support Mali's effective participation in regional deliberative bodies. Section III above and Annex D provide details on specific interventions USAID should undertake. The USAID Mali effort should be complemented by a strong WARP program pursuing the same objectives at the regional level. USAID Mali should have as a goal that, at the end of ten years, Mali be seen as a, if not *the*, leading advocate in the WAEMU region for complete economic integration.

Commercial Laws

Improving the investment climate in Mali involves the implementation of two sets of regional legislation: OHADA and the WAEMU Investment Code. As noted in Section III, OHADA is already the law of the land in all sixteen BCEAO and BEAC countries, including Mali. USAID's and the Government of Mali's goal, at this point, should be that OHADA be fully implemented, not only in Mali, but throughout the OHADA region. The Investment Code has less overall importance, but for those specific investments where it is a consideration, it must be applied smoothly, transparently, and expeditiously. Here again, USAID and the Government of Mali should have a clear common goal -- an improved investment environment -- and USAID, as part of its trade development program, should be proactive in providing the necessary training and technical assistance. Section III and Annex D present details on the type of assistance required. This would be an institution building and policy implementation program, not a policy reform program. With this strengthening, Mali would also become an effective participant in regional OHADA and WAEMU Investment Code deliberations, pushing for the full implementation of the two laws in all of the member states. The Mali Mission should

request WARP, through the Africa Bureau's TRADE program, to become fully involved in this effort.

WTO

WTO represents the policy and institutional context for global trade. Mali is not confronting any burning WTO issues at this time, but it cannot be effective in pushing for increased regional integration and a stronger WAEMU without a much better understanding of the principals underlying the WTO and a better knowledge of how its provisions are put into effect. The best opportunity for Mali to become more actively involved is the WTO-led Integrated Framework, a trade development program aimed specifically at assisting the least developed countries to identify and solve their trade problems.

Once again, in the interests of increasing Mali's trade over the long term, USAID should strongly encourage the Mali Government to participate in IF programs, and provide direct assistance to help the Government pursue the benefits of that program, including short-term technical assistance to help identify and obtain those benefits. At the end of ten years, the WTO should see Mali as one of the most active least developed countries in the IF and related programs. USAID Mali should directly access the TRADE program for funding and technical assistance in this endeavor.

WAEMU, of course, also needs to become more active in WTO, and Mali should actively push the organization in that direction. If the West Africa region is to be pulled into faster growth and development through increased trade, WAEMU must become a full participant in WTO deliberations, and must be able to negotiate effectively in that forum. In addition, WAEMU needs to speak loud and clear in United Nations and WTO forums, and especially in high level political dialogues with European counties and the United States, on two major trade issues that are particularly damaging to the least developed countries: the large subsidies given to agricultural producers in the OECD countries, and the severe import restrictions that the OECD countries place on processed products made from raw materials produced in the least developed countries, such as coffee, cocoa, and cotton. WARP should give this a high priority, utilizing the Africa Bureau TRADE and Cutting Hunger in Africa initiatives, and coordinating with the Integrated Framework.

Coordination with WARP and the Bilateral Missions

It is clear that many of the issues affecting Mali's trade must be addressed at the regional level. For many of these issues, USAID will play a supportive role in initiatives taken by other organizations, including the IMF, World Bank, WTO, the EU and France. However, if USAID/Bamako is to play a lead role in promoting increased trade in Mali, USAID needs a stronger trade program at the regional level. This could be provided by the Competitiveness Hub project to be implemented by WARP as apart of the Africa Bureau's TRADE project. In addition, it is expected that trade will be a major element in the Cutting Hunger in Africa Initiative. USAID/Bamako must be proactive is assuring

that Mali's concerns are effectively addressed in these projects. Specifically, WARP programs should give a high priority to helping resolve the following issues:

- Improve the implementation of the WAEMU CET and address other customs issues identified in this report, including pre-shipment inspections and bonding for overland transport within the region;
- Strengthen WAEMU as an organization that can effectively manage the customs union and strengthen the political commitment of the member states to eventually achieving a fully integrated economic region;
- Strengthen the working and policy formulation relationships between WAEMU, ECOWAS and WTO;
- Continue moving toward the full implementation of OHADA and tailor its provisions to the needs of the individual member states;
- Promote a strong regional approach to infrastructure development, especially transport, energy and telecommunications; and
- Resolve regional banking issues, especially the relationship between CFAF and non-CFAF countries.

On the basis of this report and other recent studies, USAID/Bamako should communicate to those designing and implementing the WARP trade activities the issues that are of particular importance to Mali in its attempts to achieve trade-led economic growth. The Mission must make clear to WARP and to the Africa Bureau that the USAID/Bamako TDP cannot achieve its ambitious objectives without a strong complementary and closely coordinated effort at the regional level. In addition, WARP should put in place a mechanism that would enable USAID/Bamako to access short-term technical assistance and training as identified in Section III of this report.

It is also clear that USAID/Bamako should coordinate its trade program with the other USAID bilateral programs of the region. The bilateral missions should reach a common agreement that intra-regional trade and trade between the countries of the region and the rest of the world is critical to the long-term development goals of the region and the individual countries. Within this context, the following regional needs should be addressed in a coordinated fashion:

- Developing the road network to facilitate and reduce the cost of transporting goods between countries, especially between the landlocked countries and the ports;
- Increasing the efforts to reduce illicit taxes and other informal barriers to trade;
- Identifying and removing non-tariff barriers (NTB) to intra-regional trade; and
- Developing stronger agricultural market information systems (SIM) in all countries of the region.

In addition, the bilateral missions should improve their communications and coordination regarding their relationships with WARP and their policies vis-à-vis WAEMU, ECOWAS and WTO. It is important that, to the maximum extent possible, the efforts of the individual missions reinforce each other and not work at cross purposes.

Enterprise Development for Export

At this time, as the Mali Mission is preparing its ten-year trade development strategy, Mali is poised for a period of sustained rapid growth in exports. The analysis in Part II shows that Mali can become a major rice exporter in the next ten years, and the rapid growth in maize production will make Mali a large net exporter of coarse grains and also increase the availability of animal feed, which is critical for the continued growth of livestock exports. There is less momentum for fruits, vegetables and oilseeds, but Mali has a strong base to build on for shallots and potatoes, and there may be ways to regain the comparative advantage Mali once had in mangoes and shea nuts.

On the market side, the most promising opportunity is the growing middle-income urban market in the coastal West African countries. Mali's goal should be to increase its share of this rapidly growing market. More specifically: at the end of ten years, Mali should have a larger share of the regional market for high-quality, agriculture-based products than it does now. That should be the basic measure of success for the Mission's Trade Development Program (TDP). This report recommends a product-focused, enterprise-based approach to achieving this objective. The measure of success for this approach will be the number and value of successful investments in processing and exporting enterprises over the next ten years, with success defined as profitably exporting agriculture-based products to regional markets. The type of assistance the Trade Development Program will be providing to these businesses will vary by sub-sector, as described in the following paragraphs.

Livestock

This is by far the most important sub-sector for regional exports and the one that should receive the most attention under the TDP. It accounts for most of Mali's exports to the region, and rapid overall export growth over the next ten years will not be possible without at least moderate growth in livestock exports. As the livestock section of Part II and Annex A show, the key to achieving this objective is increased feed supplies, not only for livestock but also for poultry. Poultry will not be a major export but it will replace red meat in the local market thus freeing up livestock for export. Therefore, the focus of the USAID program should be on three types of enterprises: feed producers, intensive poultry operations, and animal finishing operations.

The main constraints facing the poultry operations are the supply of chicks, supplies of quality feeds, veterinary supplies and services, the lack of technical and managerial expertise, and high production costs. This report recommends that addressing these production constraints be given high priority under IR-1. Assisting feed producers and livestock feeding operations, on the other hand, should be under IR-2, because these enterprises are an essential part of the processing-marketing chain that must be developed if livestock exports are to increase. For feeds the key focus of TDP interventions should be the market links between grain producers and feed producers on the one hand, and

between feed producers and livestock finishing enterprises on the other. Supplying the right feeds for livestock finishing must be made profitable for feed producers, and the TDP must address the technical and marketing issues that are preventing this from happening. It should be noted that at present maize prices during the dry season, feeding maize-based feed to livestock is not economic. The actions to address this problem are identified in Annexes A and B, and should be carried out under IR-1. Finally, livestock finishing enterprises need strengthening in technical knowledge and management and marketing expertise. Fattening costs must be minimized, and a better knowledge of the livestock markets is necessary to assure that the fattened animals are matched with the appropriate markets so that the value added is appropriately compensated.

At the sub-IR level, the measure of success for these activities will be increases in the number and size of feed production and livestock finishing enterprises. At the IR level, the measure of success will be the increase in livestock exports. A data collection system will be needed to track these indicators.

At the same time that these enterprises are being strengthened, a number of trade-related constraints will need to be addressed. These include: weak and underdeveloped border livestock markets; the lack of timely and sufficiently detailed regional market information; high transport costs; illicit taxes; slow and cumbersome payment transfers; and the weak application of commercial laws. Most of these problems are regional in nature and should be addressed through a WARP regional trade development program. The Mali TDP should include an activity to strengthen trade associations to either directly alleviate some of these problems or advocate for their solution at the national or regional level.

Rice

Rice should be the next area of concentration under the TDP. Based on the analysis presented in the rice section of Part II, Mali has the potential to export as much as 200,000 tons of high quality rice per year to regional markets by the end of the ten-year strategy period. Most of the potential for increased production is in the ON, so that is where the TDP activities should be concentrated. For Mali to produce an exportable surplus, production outside of the ON will have to continue growing at the current four percent annual rate and production in the ON will have to grow at twice that rate. As discussed in Annex C, most of the activities necessary to increase production should be part of the IR-1 program. Specifically, the conditions have to be created for private investors to develop the secondary and tertiary canals.

Under the TDP (IR-2), several actions need to be undertaken. First, increased exports need to become one of the ON ten-year strategic goals. USAID should be able to assist with this under the TDP, working with other donors, and building on its experience with the ON agribusiness program. Second, part of the rice milling industry will have to move from micro-enterprises to small and medium enterprises to produce the high quality rice needed for the export markets. These enterprises will require the same type of assistance described above for the feed and livestock finishing enterprises. They will have to

establish effective links with small and larger paddy producers, advise them on appropriate harvesting and post-harvest handling practices, and assure them of a reliable market for the higher quality raw material they will be producing. These enterprises will also require assistance in analyzing and developing regional markets for their products, as well as in using appropriate technologies, obtaining financing and operating in the formal sector.

As with livestock, the sub-IR level measure of success should be the number and size of rice mills producing high quality rice for the regional export market. At the IR level, the measure of success should be the quantity of high quality rice exported. As noted above, an ambitious but achievable goal for the end of the ten-year strategic period would be exports of 200,000 tons per year. With most of the high quality rice likely to move through formal channels, data on both of these indicators should be easy to collect.

The same cross-cutting problems that affect livestock exports will also affect rice, including: lack of financing, high transport costs, illicit taxes, slow payment transfers, and the poor application of commercial laws. Again, the appropriate approach is to strengthen the rice milling trade and exporting associations to advocate for improvements, and depend on a WARP regional project to provide solutions at the regional level.

Coarse Grains

With the current growth rates in rice and maize production, Mali could easily be exporting over 100,000 tons of coarse grains and livestock feed by the end of the ten-year strategy period. However, unlike the livestock and rice sub-sectors where rapid and sustained export growth will depend on enterprise development, the growth in coarse grain exports will happen naturally, following traditional, informal sector trade channels. The key factor for coarse grains is the cotton sub-sector and its relationship to maize production. As described in the Coarse Grains Annex, when the cotton sub-sector is strong, maize production grows rapidly. When the cotton sector is struggling, maize production stagnates or declines, threatening not only the availability of coarse grains for export but also the availability of feed for livestock.

The coarse grain sub-sector does face some export constraints, some of which the TDP can help address. Financing constraints can be addressed under IR-3, and storage requirements to reduce price fluctuations can be addressed under IR-1 and IR-3. Annex C describes how forward sales contracts could be used to address both constraints. Also, with increasing coarse grain production many small producers are becoming small enterprises and as such will be requiring the same types of management and marketing assistance as processing and exporting enterprises. These needs could be addressed under IR-2. The trade-related issues, including illicit taxes, high transport costs, the need for better regional market information, and slow payment transfers can be handled under the TDP (IR-2) though trade association strengthening activities and through a WARP regional Trade Development Program.

Based on recent production trends, coarse grain exports are likely to increase with or without USAID assistance, and it is unlikely that the TDP activities suggested above will have much impact on the rate of growth. Under the circumstances, this report does not recommend that the TDP set indicators either at the IR or sub-IR level specific to this sub-sector.

Fruits, Vegetables and Oilseeds

The momentum that is already underway for cereals and livestock does not appear to exist for fruits, vegetables and oilseeds. If exports in these two sub-sectors are to grow rapidly over the next ten years, the sub-sectors need to move from the low-quality, low-value added products currently produced and marketed in the informal sector to higher-quality, higher value-added products produced and marketed in the formal sector. An appropriate strategic goal, to which USAID, working in partnership with government and other donors, could make a significant contribution, would be an annual growth rate of ten percent per year in fruit, vegetable and oilseed exports for the next ten years. This would seem to be a minimum for these sub-sectors to qualify as an engine of growth during the ten-year strategy period. Given the difficult problems described in Part II, it can be expected that the growth rate would be lower in the early years and higher in the latter years.

For these sub-sectors, the first activity under the TDP (IR-2) should be an in-depth market study. The focus should be on the regional market, and on the four high-volume products discussed in Part II: mangoes, potatoes, shallots and shea nuts. It will be very difficult to achieve a ten percent overall export growth rate for these two sub-sectors without significant growth in the exports of at least three of these four products. The study will need to quantify consumption levels and tends, identify the competition in the different markets and at different times of the year, and make preliminary determinations of where, when and how Mali can become competitive. The exercise should produce five- and ten-year projections, and constant adjustments should be made based on experience and new information.

The next step, also under IR-2, should be the strengthening of exporting enterprises. These enterprises will have to provide lucrative, dependable markets for Malian producers. A primary focus for this effort should be the ON where only a small fraction of irrigated land is currently being used for horticultural crops. The program should start by concentrating on shallots and potatoes, two high volume crops that are already well established, and move on to other crops, based on market analyses and feasibility studies. The activities related to mangoes and shea nuts should be concentrated in the areas of highest production and should be coordinated with other donors and NGOs that are already working with these products. The strengthening needs to take place in several important management areas:

- Links to producers. Exporters must develop strong business linkages to the producers. These linkages should assure the exporter a reliable supply and also assure the producers a steady market that they can commit to. Past experience has

shown that this is not easy or automatic. The exporting enterprise must commit to meeting its contractual obligations, and, as needed, provide technical assistance, set clear quality standards and provide appropriate inputs as necessary. At the same time, farm-level extension programs under IR-1 will be needed to train the producers in production, harvesting, post-harvest handling, organization, and marketing so that they can be effective partners with the exporters.

- Technical knowledge. The exporting enterprises will require training in appropriate technologies for producing high quality products at internationally competitive prices.

- Marketing knowledge. The enterprises will need to fully understand their markets, including quality requirements and the competitive environment, and learn how to be responsive to market signals.

- Financial management. This is needed not only to assure profitability over the long term but also to be able to meet credit needs for working and fixed capital

It is clear from the analysis in Part II that, although there appears to be tremendous opportunity for increased fruit and vegetable exports, the structural changes required call for a sustained and focused long-term effort. Past experience in Mali and other countries has shown that the attractive income-elastic market for high quality products is also highly competitive, and moving the marketing system from the low-quality informal sector to the more demanding formal sector requires a strong and determined partnership of government, donors, other development organizations, and the private sector.

More than the other sub-sectors, fruits, vegetables and oilseeds will require a ten-year horizon. The process is known to be slow and difficult and there is as yet no discernable momentum to build on. The measures of success should be the same as for livestock and rice. At the sub-IR level, it will be the number of enterprises profitably exporting high quality fruits, vegetables and oilseeds to regional markets, and at the IR level it will be the quantity and value of high quality exports to these markets. As success is achieved in the regional markets, some of the lessons learned may be applicable to the global markets, in which case interventions into these markets could be added to the TDP.

Gender Considerations in the Trade Development Program

As the trade-led economic growth momentum gets underway, it is important that women be full participants in the process. As noted in Annexes A and B, women are actively involved in many aspects of production processing and marketing, but export trade *per* se is predominantly a male activity. As we move forward, the key is to assure that women benefit from the growing export markets that will be developed under the TDP. There are several obvious areas of opportunity. Perhaps the most important in terms of total size of activity is small ruminant fattening. Several studies cited in Annex A have found that this activity is at least as profitable as cattle fattening and the scale of activity lends itself to the level of resources available to women. Women are also involved in processing of

many agricultural products for household consumption and sale in local markets. In the context of the proposed TDP, possibilities for increased activity would include dried shallots and processed mangoes and potatoes. A final large area of activity is the gathering, drying and handling of shea nuts. This is almost exclusively a women's activity and, as exports grow, women will be major participants and beneficiaries.

Women are already active in agricultural production, processing and trade at the micro-enterprise level, and there are a large number of development projects financed by USAID and other donors and implemented by NGOs working to increase productivity and incomes. These projects now need to be linked to the TDP. In fact, given the well-documented difficulty in shifting production from the low-quality, high-volume products consumed locally to higher quality products for export markets, women may have a comparative advantage relative to men in the labor intensive production practices needed to supply these markets. From this perspective, targeting women under this program would make good economic as well as gender sense.

The TDP goal with respect to gender should be to achieve measurable export-driven growth in women's incomes. An important part of the TDP should be getting the existing NGO projects involved in producing for export markets. This will require: setting up producer organizations for specific products (IR-1 and IR-2 working closely together); creating and tailoring MFIs to meet the needs of these groups (IR-3); and linking the producer organizations to export markets (IR-2). Providing access to credit is a critical element of this program because the lack of resources is the major binding constraint preventing women from expanding their economic activities. The enterprise development component of the TDP should provide business development services to individual women or to women's groups, either at the micro-, small- or medium enterprise level, with specific objectives in terms of increased sales to export markets. This could be done directly by the TDP team or through NGOs already working with women's groups.

Conclusion

If the illustrative goals for each of the sub-sectors discussed above are achieved, the export picture for Mali at the end of ten years will be very different from what it is today. While livestock will probably still be the largest export to the region, Mali will also be exporting large quantities of rice and coarse grains, as well as increased quantities of fruits, vegetables and oilseeds. The fact that these will be high quality income-elastic products will bode well for Mali's long-term trade prospects. In the absence of a large-scale ambitious effort of the type described above, there is a good likelihood that in ten years Mali will still be exporting small quantities of low quality, low growth exports to the region. There is also the distinct possibility that livestock exports will have declined as domestic demand catches up with production, thus reducing the exportable surpluses. Such a situation would effectively preclude Mali's making any significant progress in achieving its poverty alleviation objectives.

The first part of this report's recommended Trade Development Program -- improving the policy and institutional environment for trade and investment -- suggests that USAID

may want to broaden its IR-2 statement to extend beyond the increased exports of selected products. Although it is in the product-focused part of the program that USAID will have the most direct and measurable impact on exports, the fact remains that Mali's export trade is dominated by gold and cotton, two products that will not be affected by the USAID program. In the long run, Mali's trade performance will have to depend on much more than livestock, rice, coarse grains and fruits and vegetables. In fact, there is no way of determining where market forces will take the Malian economy over the next 25 years. What is certain, however, is that, if the development gaps between Mali and the rest of the West Africa region and between the region and the rest of the world continue to increase, as they have over the last 40 years, Mali cannot rise out of the ranks of the least developed. USAID, therefore, needs to have ambitious targets, not only for its product-focused program but also for the overall trade and investment environment in Mali.

V. THE TECHNICAL ASSISTANCE PACKAGE

The heart of the TDP will be enterprise development for export. This objective determines what type of technical assistance will be required. Also, the program strategy has a strong product focus, so the team should be made up of product specialists, with provision for short-term consultants to provide specific technical assistance that is beyond the expertise of the product specialists. The specific responsibilities of each specialist will vary by product. Similarly, the specific type of short-term technical assistance that will be needed will depend on which of the product specialist skills will need strengthening and which are lacking entirely. The wide range of issues that confront development within each product focus virtually guarantees that the Mission will not be able to find any one person who, by him or herself, can provide the broad range of skills required. The following combination of specialty areas should be sufficient to cover the relevant products and issues:

- A *rice specialist*, who will cover the full gamut of SEG objectives: production, trade and financing. This position may require the assistance of several local hire professionals who would be directly under his/her supervision. These persons would be responsible for management of productivity enhancement (liaison with IR-1), trade promotion (IR-2) and financial services (liaison with IR-3) activities respectively.

- An *animal feed/coarse grains specialist*, who will concentrate primarily on feed production and marketing. This industry is in its very early stages in Mali and will require a wide range of assistance over the medium term, including the use of appropriate technology, quality control and an understanding of the complex market for animal feed. This specialist will also have to deal with policy and institutional issues, including cotton seed pricing, the maize technical packages being disseminated by CMDT, OHVN and others, the introduction of standard feed specifications, and legally enforceable labeling requirements. This specialist's overall responsibility will be to help create a feed industry that is economically viable and responsive to the needs of livestock and poultry producers. There may also be the need for a short-term advisor to design, supervise and analyze a survey of village-level organizations to identify structures and procedures that are effective in promoting sustainability, as well as introducing forward sales contracting for grain and livestock. This survey and its importance to the overall objectives of this program are described in detail in Annex B.

- A *livestock specialist*, who will focus on animal finishing and downstream operations, including the establishment of border facilities, market analysis and market development, including prospects for meat exports. Over the next ten years this industry will be transformed from one based on agricultural by-products to one based on manufactured maize-based feeds. Although the key to the success of this transition is the supply and price of maize, many improvements are needed in livestock finishing operations and marketing before these producers can be competitive with global meat suppliers in the coastal markets.

- A *horticultural specialist*, who will be dealing with the entire production-marketing chain, beginning with market information and moving backward to packaging, processing, post-harvest handling and, most important for Mali, the farm-level production of consistently high quality raw materials. The specific tasks will be different for each product but, in all cases, a main focus will be on the link between producers and exporters. This will be especially important for mangoes and shea nuts, since it is at the harvest and collection stage that quality drops below the levels required for export for these two products.

The main responsibility of the product specialists will be enterprise development, but they will also have to deal with critical cross-cutting issues, three of the most important being: the lack of financing for processing and exports; weak trade associations; and the lack of trade-related infrastructure. Each specialist will have to be proactive in addressing each of these problems. Each specialist will also have to become active in policy issues, for example, land tenure laws in the ON for rice, and standards and labeling requirements for animal feed.

The final technical assistance need for the TDP is for a *trade policy advisor* to oversee the activities proposed under the Improved Policy and Institutional Environment. This person will concentrate primarily on WTO and regional integration issues. He will be responsible for organizing and overseeing training and short-term technical assistance activities, but his main role will be to help Mali become more active in regional and global trade organizations. The Trade Policy Advisor should be seen as a resource to the entire government on matters of trade and investment policy. In this capacity his message should be that increased trade and investment requires more than preparing and disseminating feasibility studies, and sending marketing missions to foreign markets. The key is to have in place the policies, regulations and procedures that create the enabling environment for the increased investment that is needed for trade expansion.

Mali Trade Development Program
Contract #PCE-I-812-98-00014-00
Final Report

ANNEX A

LIVESTOCK PRODUCTION AND EXPORT OPPORTUNITIES AND CONSTRAINTS

CARANA
CORPORATION

TABLE OF CONTENTS

I. THE CASE FOR LIVESTOCK EXPORTS

Historical Controlled Exports and Slaughter

According to the most recent statistics available from OMBEVI and other sources (Table A-1), livestock exports have more than doubled[1] from their pre-devaluation levels. The transition has not been smooth. After tripling in the year following devaluation, exports fell back as domestic prices caught up with export prices and drew more of the supply back into domestic slaughter. Exports resumed their growth in 1999 and were growing along with domestic slaughter. Over this period sale prices for both cattle and small ruminants increased more than 75%. In spite of this sharp increase in price, seven years after devaluation, controlled slaughter (virtually all for domestic consumption) has risen by over 20% for cattle and over 40% for small ruminants from pre-devaluation levels. Part of the increase in the average price per head for cattle may be due to a greater concentration of fattened, heavier animals in the sale totals, but this can't amount to much of the increase, judging from the even larger increase in the sale price of small ruminants over this same period. By far, most of the increase reflects much stronger demand for red meat from Mali as a result of the 1994 devaluation of the FCFA, coupled with the imposition of countervailing duties on meat exports into WAEMU from European countries subsidizing their meat exports.

The data on herd size in Table A-1 are only approximate. These are administrative statistics. For cattle they reflect a 3% per year increase since the last agricultural census, except for 1999, when rainfall was well above average and the rate was 4.1%. For small ruminants the rate being used is 5%. Using these data as a base, offtake rates may have increased slightly since the devaluation, especially for small ruminants, but the movement of exports between the informal and formal sector makes any conclusions along these lines tenuous at best. At growth rates of 3% and 5% for cattle and small ruminants respectively, herd size is growing faster than population, but not by enough to maintain current export levels in the face of rising incomes in Mali and constant prices for red meat and poultry (Metzel, 1997).

[1] The data in Table A-1 show controlled exports increasing sharply in 2000 and 2001, essentially doubling from 1999 and up 500% from 1993 for cattle, and large, but less spectacular gains for small ruminants. Actual exports did not grow this much. What appears to have happened was that the ban on trekking live animals through Ivory Coast finally began to bite as informal taxes, extortion and banditry made trekking a very high risk operation. As animals that were formally trekked, most of which passed via the informal sector, were loaded onto trucks, they began being picked up in the official statistics. We were told by livestock traders that very few traders now use the informal sector because of the very high risk involved. The doubling of controlled exports over the 1999 -2001 period for cattle seems to validate the longstanding assertion by MDR that about half of livestock exports pass outside the formal sector. That no longer appears to be true.

The case for exports of livestock from Mali lies elsewhere than in past trends in ruminant production and offtake. It lies in past trends in cereals and cotton production and emerging trends in intensive poultry production that, taken together, should reduce feed costs, increase feed availability, stimulate intensive poultry meat production and consumption, increase offtake and average weight gain of ruminants and, consequently, increase exports of ruminants, red meat and traditional poultry.

TABLE A-1: HERD SIZE, CONTROLLED EXPORTS, CONTROLLED SLAUGHTER AND PRICES AT SALE FOR CATTLE AND SMALL RUMINANTS, WITH RAINFALL FOR SELECTED CITIES

Cattle							Annual Rainfall (mm)		Small Ruminants						Controlled Exports	
		Controlled			Average Sale Price @ Slaughter					Controlled			Average Sale Price Males @ Slaughter			
Year	Number of Animals	Exports	Slaughter	Offtake	Zebu P. Bamako	Ndama Sikasso	Mopti	Bmk.	Number of Animals	Exports	Slaughter	Offtake	Bamako	Sikasso	Poultry (# Birds)	Fish (Tons)
1984	4,899,000	140,966	187,665	6.7%	68,000	58,000	334			495,924			13,000	11,000		
1985	4,344,000	80,456	196,209	6.4%	70,000	52,000	452			148,090			15,000	13,000		
1986	4,475,000	69,077	158,888	5.1%	95,000	80,000	401			132,824			17,000	15,000		
1987	4,589,000	70,494	146,606	4.7%	109,000	80,000	345			147,217	376,527		18,000	14,000		
1988	4,703,000	46,932	145,411	4.1%	108,000	78,800	378			107,482	378,023		20,500	14,000		
1989	4,826,000	53,886	136,847	4.0%	112,000	86,000	414			105,148	355,334		21,000	16,000		
1990	4,996,000	65,708	160,694	4.5%	110,000	84,000	465	1,102	12,172,000	158,838	356,476	4.2%	22,500	17,000		
1991	5,092,132	42,957	168,828	4.2%	103,000	82,000	358	899	10,899,000	163,572	339,120	4.6%	20,000	16,000		
1992	5,226,893	59,442	193,370	4.8%	95,000	82,000	390	930	11,443,800	213,325	334,867	4.8%	21,000	16,000		
1993	5,380,281	41,483	185,102	4.2%	90,000	82,000	359	741	11,954,400	128,099	312,250	3.7%	19,000	14,000		
1994	5,540,633	176,435	186,743	6.6%	105,000	91,000	640	1,157	12,552,400	340,137	306,132	5.1%	27,000	20,000	70,747	
1995	5,708,000	106,871	129,561	4.1%	130,000	71,000	357	824	13,179,000	426,900	301,099	5.5%	25,000	15,000	376,773	
1996	5,882,000	60,250	148,821	3.6%	144,000	64,000	514	768	13,807,000	213,211	318,466	3.9%	30,000	15,000	351,310	1,893
1997	6,058,000	118,930	157,781	4.6%	160,000	85,000	328	1,025	14,499,500	295,123	319,393	4.2%	28,000	19,000	753,826	2,068
1998	6,239,750	109,146	172,214	4.5%	163,000	133,000	455	975	15,224,800	277,475	396,223	4.4%	29,000	17,000	243,606	1,361
1999	6,496,943	129,064	190,907	4.9%	170,000	101,000	573	1,143	15,985,988	323,984	392,308	4.5%	29,000	17,000	259,590	1,800
2000	6,691,851	279,356	211,323	7.3%	160,000	101,000	414	792	16,785,287	439,057	418,551	5.1%	29,000	21,000	398,240	
2001	6,892,606	226,819	228,696	6.6%	164,000	134,000	453	734	17,624,551	425,209	446,313	4.9%	42,000	28,000	783,086	

Source: Ministry of Rural Development, Planning and Statistics Unit, CD ROM; OMBEVI; Meteorological Service

Some numbers adjusted based on errors discovered in aggregating monthly data to get annual totals.

Price data for 2001 are estimated based on incomplete data.

We discuss trends in cereals production and the implications for cereals prices in Annex C. Absent exports, and barring serious weather problems, cereals prices in Mali appear to be on the verge of a secular decline as domestic supply of cereals begins satisfying domestic demand. A rapidly expanding livestock and poultry feed and finishing industry offers to retard and mitigate this decline, particularly for coarse grains. Lower cereals prices will make it cheaper to provide supplemental feed to ruminants, will reduce the opportunity cost of producing forage, and will provide a stronger market impetus for livestock feeding operations than that which now exists. With the export market for red meat expected to be able to absorb, at current market prices, virtually any amount of exports Mali can provide over the next ten years under the current CET tariff, livestock feeding represents the best opportunity for adding value to cereals and livestock exports, for expanding linkages between the two sub-sectors, and for increasing farmer and consumer incomes. Moreover, better feeding will improve the condition of the animals, thereby increasing the frequency of ovulation, shortening the age at first parturition and the average interval between births, and increasing both offtake rates and quantities available for export still further.

The Economics of Fattening Operations

Metzel et al. (1998) summarize data from a study of cattle and sheep fattening operations conducted by Diarra (1997). That study shows an average cost, including family labor, of producing a kilo of live weight beef to be 870 FCFA/kg. (1996 prices) for all operators. Small operators (less than ten animals) had substantially lower costs (740 FCFA/kg) than large operators (ten or more animals - 900 FCFA/kg.). In addition, the value of manure was substantially higher for small operators (367 FCFA/kg. live weight added) than for the larger operators (145 FCFA/kg. live weight added). Subtracting the value of manure from the total cost leaves a net cost of production of around 755 FCFA/kg. for larger operations and 375 FCFA/kg. for the smaller ones. The value of manure estimated for the smaller operations seems unrealistically high, but even cutting it in half still leaves the net cost per kilo of live weight at around 560 FCFA. This compares with an estimated sale price of 650-700 FCFA per kilo of live weight.[2] Using a different approach, Wyeth (1997) calculates the cost of producing a kilo of added live weight from fattening operations at 465-570 FCFA, depending on whether an efficient or typical ration was provided. Wyeth's analysis did not include the value of the manure. Diarra estimated the average weight gain to be .7 kgs/day, while Wyeth assumed an average gain of 1.0/kg. per day.

The Diarra study also looked at fattening of sheep. The very small sample size (two producers) makes the results not very reliable, but it is worth noting that the cost per kilo of live weight added was around 260 FCFA, not deducting the value of the manure. Although that number too is probably unrealistically low, it suggests that, at a minimum, fattening small ruminants is at least as profitable as fattening cattle. Moreover, the fact that much of the fattening of small ruminants is done by women in one to three animal lots makes this an especially attractive activity for achieving the mission's gender objectives.

[2] The studies did not provide beginning or ending weights of the animals.

Taken together these studies suggest that that fattening of ruminants, large and small, is indeed a profitable enterprise for many of Mali's farmers, especially smaller producers. It is also profitable for the economy as a whole, as indicated by the DRCs calculated by Diarra (1997), .65 for the larger and .46 for the smaller cattle operations, and .19 for small ruminants. It will become even more profitable if cereal prices decline in the face of stable prices for live animals. For smaller producers the value of manure is an important component of the net benefit and very beneficial for their crop production activities. On balance then, ruminant fattening operations can add weight at a cost of 450-550 FCFA/kg., or less, especially if they are undertaken by small producers who benefit most from the manure, who have access to on-farm byproducts, have access to quality feeds, and are provided some guidance on the amounts of feed supplements to use. These are the producers that are the target of USAID's poverty alleviation efforts.

Emerging Role of Poultry

Intensive poultry production will be a key element in this transformation of the agricultural sector. Poultry provides the most efficient biological mechanism for transforming cereals into meat. There are now dozens of former civil servants, many with training in agriculture and livestock, and dozens of others engaged in poultry operations of 5000 birds or more. Most of these are laying operations, but intensive broiler production is increasing rapidly with support from PDAM, an aviculture development project financed by the Arab Bank for African Economic Development.

Although there are few quality data on intensive poultry production available in Mali, the numbers are clearly miniscule in comparison to the coastal countries. Broiler chick imports have doubled each year for the past two years under PDAM, but still amounted to only 132,000 birds in 2001. Laying chick and fertilized egg imports have grown over 30% per year over the same period, suggesting a current national improved laying flock of around 700,000 birds. Mali Poussin operates incubators for hatching fertilized eggs, but, as yet, has not found it profitable to establish a hatching operation. This will probably change with another year or two of growth in the subsector.

There is now enough momentum to warrant optimism that productive capacity in the poultry subsector can respond to market opportunities as they develop. To a significant extent, these opportunities will develop inversely to feed prices and positively with feed quality, perhaps the two factors that most limit development in this subsector at the present time. The anticipated decline in cereals prices and current reforms in cottonseed and cottonseed cake pricing and distribution should take care of the former. Continued, if not more targeted, support from the CAE for feed producers in the areas of production technology, feed composition and feed marketing could take care of the latter.

Because of the importance of feed costs in poultry production costs, if Mali is a low cost producer of cereals, it should also be able to become a low cost producer of poultry. In the long run this will require developing a domestic chick production capacity, and in the immediate future, producing a dependable supply of quality feeds and strengthening veterinary and extension services aimed at the subsector.

Although there are no studies of DRCs or costs of production for intensive poultry operations in Mali, one can infer a lot from cereals markets and from current production technologies. The long run cost of producing chicken meat with bones will approximate six times the cost of a balanced feed ration. In the Malian context an efficient poultry operation can aspire to a feed conversion ratio of 3:1, versus the 3.5-4.5:1 ratio that prevails currently. With operating capital and/or commercial credit sufficient to acquire raw material inventories during the harvest season when prices are low, feed producers should be able to produce a balanced poultry ration for an average price of 110 FCFA/kg or lower. This implies a cost of producing poultry meat of somewhere around 650-700 FCFA/kg., and a retail price of around 1,000-1,100 FCFA/kg. at current cereals prices. Currently, improved, intensively raised chickens sell for around 1,500 FCFA/kilo, versus 1,200 FCFA/kilo for meat with bones. Clearly, as intensive poultry production becomes more efficient it should have little difficulty selling well below red meat, as it does in virtually every country where both are produced.

Intensive poultry production is important for promoting exports not because of its own potential for export, but because of its potential for freeing indigenous poultry and red meat for export. Traditional poultry is a preferred meat in most of non-coastal West Africa, and sells for more than red meat. Traditional poultry are hardy and are able to survive the arduous journey from farm to market, including to markets in coastal cities. Intensive poultry do not survive long journeys so well. Increased availability of intensive poultry in the local market, at lower prices, will make export markets more attractive than the local market for the traditional breeds.

Increased availability of lower cost poultry will divert more red meat to the export market as well, for much the same reasons. With lower cereals prices, intensive poultry production will put downward pressure on prices for cattle and small ruminants. The more elastic demand for red meat in the coastal countries will keep the price from falling there, maintaining the incentive for traders to divert local production to these export markets and restraining the decline in domestic prices for red meat. USAID may want to revisit its activities and indicators for IR 1 under SO 9 to reflect this potential for intensive poultry production.

Not only does intensive poultry production offer promise for helping the mission attain its animal feed objectives under IR 1, it could provide a powerful sustainability indicator for IR 1 in the form of number of extension agents employed by the non-government sector. Privatizing extension services is only just beginning in many West African countries. Indeed, Mali may be farther along this road than many. Intensive poultry production offers an excellent vehicle for reinforcing this process. Hiring extension agents trained in livestock husbandry to sell poultry feed on a commission basis provides the incentive for quality extension support so often lacking in government programs. If this were combined with delivery of quality feed to smaller producers by the agents, for an added cost that covers transportation costs, it should be possible for a livestock extension agent to develop a market for 200 tons of feed per year. With a 5 FCFA/kg. commission the agent could earn 80,000 FCFA/month, a very attractive income for an unemployed or underemployed graduate, of which there are many in Mali. More importantly, the agent would have a direct interest in the financial success of the producers he is serving. The substantial amount of feed required to maintain a 5,000-bird flock, and the concentration of the point of delivery of services provides what are arguably the optimum circumstances for such an

undertaking. The same logic applies to ruminant feeding operations as well. The agents could expand their services into veterinary products and certain veterinary services not prohibited by law. The lack of transportation facilities by many smaller producers actually becomes an asset for this approach since the agent can offer bundled services in an environment where transaction costs are very high. Of course, adding a couple of agents with a vehicle adds considerably to the investment and operating costs of small feed milling operations. IR 3 supported financial initiatives would need to be integrated with any such IR 1 activity.

Assessment of Export Opportunities for Red Meat

Mali's main trading partner for livestock exports has traditionally been the Ivory Coast. Ivory coast imports about 145,000 head of cattle and 200,000 head of sheep and goats each year, not all of which are from Mali (FAOSTAT). According to Diakate (c2001), Ivory Coast accounted for 83% of Mali's official cattle exports of 129,000 head in 1999. Burkina Faso took 12% and Senegal 4%. Unofficial exports probably followed the same pattern. According to livestock traders, these percentages are changing dramatically in 2002 as increased harassment and political unrest in Ivory Coast has diverted more exports to Senegal and Guinee. Guinee is the portal to Sierra Leone, which imported 25,000 head of cattle in 1999, and Liberia. According to FAOSTAT, Senegal imported 10,000 head of cattle and 380,000 head of small ruminants in 1999.

The data in Table A-2 are only indicative. They appear to reflect only official exports and imports, and are not exhaustive of all countries in the zone. The zero values are probably missing data rather than zero. There were no imports into Mauritania, and no small ruminant imports into Algeria, which, by all accounts, is simply not correct. The large difference between exports and imports probably reflects that fact that there is more to pay (in time and money) when exporting than when importing, so more exports than imports go undeclared.

Regardless of its completeness, the data in Table A-2 clearly show that Mali is a major exporter of livestock, and the amount of its exports, even if double the reported numbers, is not extremely large in relation to existing effective demand for live animals in the region. And though the particular destination of Mali's livestock exports may change from year, the strong demand for red meat in the Coastal countries will continue. This demand will be reinforced by continuing rapid urbanization and rising incomes in these countries.

The key issue for export markets for Mali's livestock is one of price rather than effective demand. Because the coastal countries are all important importers of meat, market prices are set by world prices, in conjunction with the common external tariff of 20% and the response of individual countries to world market prices. At the present time Mali benefits from both the common external tariff and countervailing duties imposed on subsidized meat imports from Europe by Ivory Coast and Senegal. This translates into a floor price for Mali's live meat exports to those same countries that is considerably above current world market prices. This floor price is currently above the cost of adding a kilo of meat to ruminants, both large and small, via seasonal fattening operations, though not those using grain-based feed rations at cereal prices prevailing this year. Until Mali and other sahelian livestock exporters are able to satisfy demand for imported meat within the member countries of the union, this margin above world prices should continue and

Mali will have little incentive to export to counties outside of the union where prices will be lower. Should exports to coastal countries be cut off for political or other reasons, then domestic prices for livestock will have to fall by approximately the amount of the duties before exports to coastal cities outside of the union will become economically attractive on a large scale.

This is not the same as saying Mali will have to reduce its costs in order to generate significant exports to countries outside the union. The devaluation in 1994 increased the cost of imported meat relative to Malian livestock, without a corresponding increase in the cost of producing and marketing livestock in coastal cities. This generated substantial economic rents for Malian livestock producers. Those rents fairly quickly became embodied in domestic prices for livestock as well, so much so that exports dropped sharply in the years immediately following devaluation as domestic sales became more attractive relative to export sales. These higher prices for live animals no doubt stimulated some additional feeding of livestock, and certainly had an immediate, if short-term impact on off-take. However, the longer-term effect on off-take and feeding is less clear. Cereals prices increased too after devaluation, and in 2002 were at record highs, certainly too high to provide an economic source of feed for livestock in all but very special situations. Off-take has slipped back to more traditional levels. The main difference is that prices are now higher. If Mali faced prices in coastal cities that were 20 or 30% lower because of a lowering of protection, prices for livestock would respond just the opposite of how they responded following devaluation, probably with little long run impact on the rate of off-take.

What causes exports and production to expand following a devaluation is that the higher domestic price for exported products, assuming it is passed through to producers, makes it economic to intensify production in ways that were not economic before devaluation. For cereals this means applying more fertilizer and intensifying land preparation, cultivation and harvesting since labor availability during the cultivation season is already in short supply. For livestock this means providing more feed and veterinary inputs to add weight to existing stock and to increase the birthing interval of breeding stock. This would most likely occur in the agro-pastoral and other areas where feedstuffs are relatively plentiful. Devaluation probably doesn't influence the long-run behavior of the traditional herder much at all. His constraint is pasture and rainfall, and that does not change easily or quickly. He sells animals when he needs cash or when the animal may very well die any way. Otherwise he keeps adding to his herd. He can increase the rate of ovulation and the calving interval only by providing supplemental feed to breeding stock. For him to do this, feed must be fairly cheap. The key, then, to permanently increasing the rate of off-take is availability of relatively cheap feed. In Mali, this is most likely to happen on a broad basis only from increased cereals production and planted pasture.

Its not just a reduction in effective protection that presents a potential problem for livestock exports from Mali. The coastal countries that are importing Mali's animals are not standing still with their livestock production programs either. They too are striving for food self-sufficiency. The case of Ivory Coast is indicative, though the details no doubt differ from country to country. De Troyes (1997) shows that production of meat in Ivory Coast more than doubled between 1975 and 1995, amounting 53,700 tons in 1995, or 53% of national meat consumption. Bovine meat production tripled during this period to 20,300 tons per year.[3] Poultry accounted for 19,400 tons

[3] An important part of that growth was due to the settlement in northern Ivory Coast of livestock of sahelian origin.

or total meat production in 1995, and pork, most of the rest. Imports of meat and livestock from within Africa amounted to 41,100 tons of meat, and 6,900 tons of meat came from outside Africa. At the same time, red meat consumption was declining, falling from 9.1 kg. per person in 1980 to 7.2 kg in 1990 and 4.9 kg in 1995, following devaluation, even as urbanization proceeded apace (Wyeth, 1997). This corresponded with a substantial increase in fish production - Ivory Coast consumes twice as much fish as meat (16 kg/per/yr).

TABLE A-2: EXPORTS AND IMPORTS OF RUMINANTS IN WEST AFRICA, 1999
(Number of Animals)

Country	Cattle	Sheep & Goats
Imports		
Nigeria	330,000	770,000
Ivory Coast	141,988	229,188
Senegal	10,000	380,000
Ghana	55,681	20,254
Sierra Leone	25,000	40,000
Algeria	20,016	0
Benin	15,000	12,000
Liberia	1,546	2,760
Togo	68	1,483
Guinea	0	18,000
Total Imports	**599,299**	**1,473,685**
Exports		
Burkina Faso	131,885	309,363
Chad	81,850	66,072
Mali	129,000	450,000
Niger	22,487	160,395
Total Exports	**365,222**	**535,830**

Source: FAOSTAT

These numbers show that Ivory Coast was able to increase meat production at well above the rate of population growth (4.3% for meat versus 2.3% for population), while reducing total meat consumption. Still, imported meat represented 47% of total meat consumption in 1995. Rising incomes and urbanization will limit the governments ability to restrain demand for meat much further, and the effects of the sharp price increase on consumption following devaluation have, no doubt, dissipated somewhat. Therefore it seems unlikely that demand for Mali livestock by Ivory Coast will change appreciably from the current situation, in the absence of fewer restrictions on imports from outside the region. Without doing a similar country-by-country analysis, it seems reasonable to assume that Mali's other trading partners find themselves in similar situations.

Strong demand does not mean Mali faces smooth sailing with respect to livestock exports to Ivory Coast. From pressures on local butchers to hold meat prices down, to harassment of Mali's livestock traders, from regulations that forbid back-hauls of fruits and vegetables in refrigerated trucks that have carried meat, to the construction of military barracks on the border post, Ivory Coast clearly does not see expanded trade in livestock and meat with Mali as desirable. Fortunately, the existence of WAEMU constrains its ability to be too aggressive in putting up barriers, and gives Mali a means for dealing with them when it does.

The situation in Ivory Coast is not new; it has been building for several years. In spite of recent civil unrest, it is not likely that trade flows will be interrupted in a major way for more than a brief period, unless hostilities continue. At the margin, though, the handwriting is on the wall. Diversifying markets for livestock should have a very high priority for Mali traders. Based on our conversations with some of them, it already does. The tariff structure suggests that diversification will find the most success with other WAEMU countries than with those outside of the union. This, and the fact that Burkina Faso is much closer, probably explains why Mali's livestock trade with Ghana has not developed as much as one would expect given Ghana's population and livestock resources.

While there may be short-term-adjustment problems in developing new markets, the effective demand for red meat seems to be there. Moreover, there seems to be plenty of room for that demand to develop further. Table A-3 shows that livestock holdings per capita are quite low in most of the coastal countries. When viewed with the import data in Table A-2, it seems likely that export demand and export prices for livestock should remain quite strong over the ten-year planning horizon of the next strategic plan. Capitalizing on this demand will require active assistance from donors and from the Government of Mali in several domains, which are discussed later in the report.

II. CURRENT TRADE CHANNELS FOR LIVESTOCK

Livestock move from producer to consumer through a series of intermediaries that help producers get a better price for their animal. Whether a herder or a sedentary producer, most producers entrust their animal for sale to a broker. The sales typically occurs in a local or collection market, where traders purchase animals one, two or a few at a time from livestock producers and their agents. The broker is a trading professional who works for a fee. He may provide lodging for the producer, who sometimes brings his animal to the market the day before the market is open; typically they are friends. The producer, especially if a herder, tells the broker what he has to get from the sale, often because of a specific monetary need that motivates him to sell an animal. The broker, not the producer, takes the animal to the market on market day and negotiates a price with the buyer, usually an intermediate level professional trader. After the sale he deducts his fee and

TABLE A-3: CATTLE, SHEEP, GOAT AND HUMAN POPULATIONS IN WEST AFRICA

(1999 Units)

Country	Cattle	Sheep	Goats	Human Population	Livestock Units per Capita
Burkina Faso	4,704,000	6,585,000	8,395,000	11,246,000	7.1
Ghana	128,800	2,658,000	2,931,000	18,893,000	1.5
Guinea	2,368,000	687,000	948,000	8,021,000	1.3
Ivory Coast	1,377,000	1,416,000	1,111,000	15,685,000	0.9
Liberia	36,000	210,000	220,000	2,709,000	0.8
Mali	6,427,500	5,991,000	9,995,000	11,039,000	7.8
Mauritania	1,433,000	7,176,000	4,784,000	2,582,000	23.7
Niger	2,174,000	4,266,000	6,560,000	10,455,000	5.4
Nigeria	19,830,000	20,500,000	24,300,000	110,845,000	2.2
Senegal	2,927,000	4,497,000	3,833,000	9,184,000	4.9
Sierra Leone	420,000	365,000	200,000	4,272,000	0.8
Togo	275,200	840,000	1,357,000	4,388,000	2.6

Source: FAOSTAT; assumes one bovine or five small ruminants equal one livestock unit.

gives the balance to producer. Producers believe they get a better price with this system. If this layer were removed, it is likely that total marketing margins would be no lower, but the producer would simply get a smaller share of the ultimate sale price in the terminal market.

The intermediate trader visits several collection markets buying, and sometimes selling, as he builds a lot for sale at a regrouping market. These are located at key points along transportation or trekking routes from the livestock producing areas to the final markets. The process continues up through regional markets and back down to terminal markets situated at the major consuming centers. At the regional level the exporting trader or a transport agent arranges for truck transport

to the desired export market center. The larger traders sometimes advance cash to their correspondents for purchasing animals on their behalf, but this practice seems to be less prevalent than for cereals. This is probably due to the fact that livestock are not a homogeneous commodity. A trader's profits depend to a greater extent on his skill in selecting which animals to buy.

The cost of commercial transport can vary by a factor of three, depending on the time of the year (Wyeth, 1997). Transport costs are highest when cotton begins moving to shipping ports. At this time truckers charge for both outbound and return trips because of the uncertainty of getting goods for the return trip and competition for the outbound space. Other countries have created transport exchanges that arrange for back hauls for outbound transporters. When such arrangements are made, the cost of outbound transport during the busiest and most expensive period drops by about half. It appears that Mali does not yet have a functioning transport exchange, although we have conflicting information on this. CILSS is currently seeking funding to establish one.

Somewhat similar to cereals markets, livestock traders seem to fall into two broad groups, those who have correspondents or informants in district and regional centers and those who do not. The former group usually has up to date market information through their correspondents, while the others have to make do with second hand information. It is this latter group that would find regular market reporting on livestock by OMA to be most helpful. In both cases, however, traders said such information is not always helpful, that prices can change from morning to afternoon, depending on how many animals and how many traders are in the market. Sometimes radio reports of low prices or plentiful supplies in a particular market produce a glut of traders the next market day as traders respond to the news. Still, about half of the traders and producers we spoke with indicated they would find regular reporting on prices and quantities helpful.

III. CURRENT AND LIKELY FUTURE CONSTRAINTS ON LIVESTOCK EXPORTS AND POSSIBLE SOLUTIONS

Export of livestock from Mali faces several obstacles that either increase costs unnecessarily, make it difficult for markets to communicate the correct incentives, or make it difficult for exporters to respond to market incentives. Some of these are regional in character and will require a regional response to rectify. Others are institutional and will require changes in government policies or priorities. Still others are technical or information constraints that will require assistance directed at various actors in the production and marketing chain. Virtually all of them, from production to final sale, either increase the cost of exports or reduce the potential return. In the short run, the fairly high level of protection offered by the WAEMU common external tariff and countervailing duties serves to offset some of these costs and to equalize the playing field with respect to imports. In the long run, however, producers and consumers throughout the customs union will benefit from reduction of both the duties and the costs.

Factors Which Retard the Growth in Livestock Production And Offtake

Sustained growth in exports requires sustained growth in herd size and offtake. Mali needs to develop a more efficient and responsive live animal supply by strengthening input processing technology, input supply markets and input quality on the one hand, and animal production technology, management and marketing on the other. Feed is a critical component in this process because it has a direct impact on ovulation and the ability of ruminants to achieve maximum reproductive potential. Animals have to be born before they can be fed.

Poor Quality Feed

Timbo, Diakite and Metzel (1999) identify the expense and the lack of a reliable supply of quality feed supplements of known and consistent composition as an important constraint on livestock production. Improving the availability, quality and cost of feed is a *sine qua non* for sustained growth in livestock exports from Mali. Otherwise increased local demand for red meat is expected to absorb available supply before the next Strategic Plan is complete (Metzel et al., 1997)

The animal feed industry as far as grain supplements, concentrates and balanced rations is concerned is very fragmented and under developed in Mali. One part consists of firms that sell animal feed more as a way to market by-products than to provide the kind of supplements needed by specific livestock operations. The other part consists of small, multi-purpose mills where feed producers provide basic milling services for the preparation of rations according to feed formulations provided by the client, in most cases, poultry producers.

The Grand Moulin of Mali, one of the larger providers of livestock feed, uses rice and wheat bran as available, sometimes using only wheat bean, without changing the label on the sack. Sometimes the company has nothing at all to sell. HUICOMA, the largest producer of livestock feed in Mali, has a monopoly on processing cottonseed. As a result it uses large amounts of cottonseed cotton seed cake in its feeds, largely because it obtains cottonseed via an administrative quota at a price

well below world market prices. This encourages overuse of a very valuable commodity in its feeds. A prior system of quotas limited the availability of cottonseed to other feed suppliers and, as a result, the availability of quality feeds throughout Mali. Recent modifications in how the quotas are allocated appear to have resulted in Mali livestock producers having access to as much of the product as they are willing to pay for, but has not reduced the over dependence on cotton seed in HUICOMA feeds.

Poor technology for mixing feeds presents an ongoing problem for producing quality feeds from the many small scale mixing operations spread throughout the country or operated by individual farmers for their own use. Many producers blend their own feed, even though they don't have the kind of equipment needed to ensure good distribution of micronutrients nor the kind of knowledge to adapt their rations to changes in market prices and product availability and still maintain a quality ration at minimum cost. This reduces value-added from the feed as compared to a more balanced or more appropriate mix. Properly balanced feeds are especially important for intensive poultry production to succeed.

There seems to be considerable scope under IR 1 for the preparation of well-mixed concentrates that are designed to be combined with specific by-products and cereals available locally in different parts of the country for feeding to ruminants. These concentrates could be mixed with the locally available energy sources, either by smaller feed mills or by farmers directly, or used to supplement locally available lower quality feedstuffs. This would produce considerable savings in transportation costs for the bulk of the ration. Such products should find a ready market in the border areas of nearby countries where high transport costs would give them a competitive advantage over complete rations produced farther away in those countries. Image based instructions on the bags, coupled with extension based marketing, could provide the information most livestock producers need in order to use these supplements relatively efficiently. Helping developing prototype products of this sort would be a good way for the CAE to promote, at least indirectly, exports of both livestock feed and animals.

Unreliable Feed Supplies and Feed Costs

Inadequate storage for feed components limits the supply of feeds at certain times of the year, as agricultural by-products have to compete with cereals for available storage during the harvest season. Increasing production of wheat and forage on irrigated land during the dry season may provide a partial solution to this problem in the short run, until use of grain instead of just by-products becomes financially profitable for feed producers. Increasing availability of financing for the feed stock inventories of feed producers under IR 3 would also help.

Many feed producers do not have the capital to be able to stock up on feed components at harvest time when prices are lower, in order to maintain a more stable price for their feeds. If the price of cereals increases sharply between harvest and the main feeding season, the price of feed increases similarly, when it is available. This creates problems for producers since it is difficult to put animals on and off feed at will; it significantly increases risk and raises costs. Blended rations do not store as well as the component feedstuffs, without deterioration, so this is not a problem that livestock producers can solve very well on their own. The solution is to increase financing

available to feed operators so they can lock up supplies at harvest and provide a reliable supply throughout the year that is not too volatile in price.

Feed producers can provide more stable supplies if they could get access to commercial credit using their feeds in storage as collateral. Another approach discussed in the Cereals Annex is to promote, under IR 3, development of contracts for forward delivery of cereals between village or producer associations on the one hand, and feed producers on the other. In either case the feed producer is combining a grain speculation business with a feed production business. In the latter situation, the grain speculation is done with the participation of farmers. It's hard to see how one or the other can be avoided if the goal is to assure an ample supply of quality feeds, at a reasonable price, at all times. Reliability is an even bigger factor in the export market since the buyer can't just drive over to the feed plant and pick up some feed when he depletes his stock.

Although expense and quality are important factors limiting use of livestock feed supplements at the present time, this should change as cereals prices decline, peanut cake, cotton seed and cotton seed cake become more freely available at market prices, and feed processors pay more attention to extension as a way of marketing their feedstuffs and stimulating their use. There appears to be a significant opportunity for feed mills, both large and small, to provide and finance market-based extension services under an IR 1 activity. They could employ private extension agents to market and transport feed on a commission basis to the livestock producers they advise. One agent could earn in excess of 80,000 FCFA/month if he could sell 200 tons of feed in a year. This is a realistic objective.

.

Factors Which Restrain Marketing Livestock

Most of these factors are not particular to livestock exports. They affect cereal and horticultural exports as well, though not all to the same degree.

Illicit Road Taxes

Traders in most sahelian countries face the problem of numerous police, customs, and other checkpoints along the major trading arteries in the region. Typically these are rent seeking points rather than regulation points, a form of extortion, in that traders do not even have to be in violation of anything to be detained until payment is made. The problem seems to be more severe in the WAEMU countries than in Ghana, and more severe against Mali traders in Ivory Coast than elsewhere. It occurs within Mali as well, although to a much lesser degree.

It is not clear how much of the money paid at these check points is against a receipt, which would suggest that a legitimate law or regulation had been violated by the trader, at least in the mind of the assessing officer. The impression we have is that most is unrecorded. The amounts can be staggering, and have been increasing steadily over the years. Early references mention total costs of 100,000 FCFA per truckload for cattle (Metzel et al, 1998). Today, traders with whom we spoke say the amounts can go as high as 500,000-600,000 FCFA per truckload.

The cost of these illicit taxes is not just the money they cost traders, but the time transporters lose at each checkpoint, and the reduction in export earnings caused by those higher costs. The high level of these informal taxes and the delay they impose appears to be a major factor pushing more livestock traders to use the formal sector; these taxes are much higher on informal exports than on formal exports for which all documentation is in order.

Dealing with illicit taxes will require a united front from all donors, and strong support from African regional organizations. CILSS is still seeking funding for its Observatoire des Pratiques Anormales", a monitoring program using transporters to record all stops and illicit taxes paid on selected major transportation routes across the region. The intent is to compile and disseminate this information to the various governments in the hope of moving them to take action. Publishing the results in local newspapers might help too. With a regional African organization taking the lead, there is room for hope that a degree of social intimidation and public shaming of the worst offenders might succeed in bringing about a meaningful reduction of such activities over time.

In addition to illicit taxes arising from simple rent seeking behavior on the part of public officers, there are incidences where duties and taxes, such as TVA, are levied on livestock exports incorrectly. There is probably no way to know how much of this arises from ignorance and how much from simply choosing to ignore regulations, but one can certainly conceive of ways to rectify it or to compensate traders for them when they occur. The procedures available to do this now apparently are not very effective, suggesting that ignorance is probably not the real cause of such "mistakes". If this is true, training customs agents may not provide an effective solution.

High Transport Costs

The poor state of roads and high taxes on fuel and transportation equipment increase transportation costs throughout Mali. While a reduction in these taxes would certainly make Mali's exports more competitive with non-WAEMU countries, the current fiscal situation does not provide much hope that such reductions will be forthcoming. USAID could probably avoid a lot of fruitless exchange by not even addressing this issue with the Government. Using these taxes to improve roads is another matter. So is supporting regional and national transport exchanges to arrange back hauls for transporters. Ivory Coast has one but we are not sure about Mali. One source indicated that CILSS has been the leader in promoting the transportation exchanges and has approached USAID for financing. Another source identified the Bureau Malienne des Chargeurs as a currently functioning exchange. In either case, this activity seems like a win-win for everyone.

Transport of livestock through Senegal is impeded by the lack of cattle wagons for the train. Sometimes it takes two months to get a wagon. Trains are desirable because they reduce the number of checkpoints where extortion occurs. There may be potential for the livestock trade association to purchase its own wagons for its sole use. This would give it a revenue source and a increase its importance to traders. We were unable to get cost or wagon movement information to assess the financial feasibility of this option, but it would seem to warrant an investigation by IR 2 implementers and possible financing from IR 3 programs.

Inadequate Market Price Information from Regional Market Centers

Livestock traders with whom we spoke were split on the usefulness of just regional price data for deciding when to move livestock into export markets. They need to know a lot more than prices before deciding to make a move. They rely on their correspondents and other contacts in the target market, typically members of the same clan, to get an idea of supply around the market, availability of other products in the market and general market conditions that lead to a decision to move. Prices in regional export markets, however, would be useful for keeping track of broad trends and imbalances that last more than one or two market days, that may lead to future action. For this purpose, price information does not have to be collected and reported on the same day to be useful, but fresher is obviously better.

National price data has a much broader constituency than West African regional data. National data helps producers and their representatives know the domestic market better when negotiating with buyers. Because the price data covers several different products and markets, participants can get a good feel for the condition of the market for substitutes and negotiate accordingly. Typically, the benefits of such market information systems accrue to producers and consumers, not traders.

Exporters and traders can benefit from specific market price data, but only if it is proprietary or limited in distribution. Their goal is the opposite of the goal of the SIMs. They want an edge. They want to know what others don't know so they can trade on it. There is an inherent conflict between data for transparency and data for trading. Consequently, it does not appear to be very realistic to expect traders to contribute to a more open and accessible price collection and dissemination system such as the SIMs and OMA provide, unless they get the information a day or two before the others. The chambers of Agriculture may, but that would be for public relations purposes and to benefit producers in their negotiations with traders, not traders in their negotiations with producers. Consumer groups would also have an interest in contributing, if they existed, since prolonged imbalances in prices would be corrected more quickly by making those imbalances known. In Mali their interest is protected by public sector support of the programs. In the absence of adequate government support for such initiatives, ongoing support from donors, even those concerned with sustainability, would not only seem appropriate, but a necessary condition for helping markets work more efficiently.

The problem with the current SIMs is that Mali provides much better information through its OMA than it receives from the other SIMs. Most of them do not benefit from government financing as does OMA, and most have much less extensive collection and reporting systems than OMA, and neither they nor OMA collect data on livestock. If Mali's producers and traders are to benefit from their activity, they will have to be strengthened. This will require support from WARP or another regional entity that can oblige timely reporting to other countries in the region in return for ongoing assistance. Such support from WARP would come under IR 2, while support for national price dissemination would be more of an IR 1 activity.

Inadequate Financing for Fattening and Exporting Livestock

Livestock traders always seem to say they don't have enough financing. There is no easy way of securing loans for livestock exports apart from the general assets of the trader. Unlike cereals which can be held in storage as collateral for financing additional purchases, livestock can be moved at any time and require constant care and attention in order to prevent loss of the collateral. Once they are across the border there is little the lender can do to exert a claim over the animals. The poor state of commercial courts and the uneven application of commercial law make the outcome of legal action highly uncertain and problematic. Livestock trading is, and for the foreseeable future will be, financed by the traders themselves and their friends and families.

Loan guarantees can increase the amount banks are willing to loan to agriculture, and they certainly make sense for those traders who have not yet established a credit history. However, such guarantees should only be for a fraction of the loan amount, and should come into play only after the substantial collateral of the borrower has been liquidated. There is no solution, nor should there be, for traders who have defaulted on previous loans. Sustainability means the system can manage itself, and it can't do that if more than a small percent of outstanding loans are not repaid. There will be enough valid credit risks that will default to satisfy that small percent. Lending to deadbeats will only compromise sustainability.

One of the reasons banks are loath to lend to agriculture is the poor repayment history of many such loans. In part this comes from the inability of many banks to adequately evaluate the investments for which credit is being sought. According to some observers loans that come through BNDA, a quasi government entity, have the added problem of sometimes going to friends of someone who is politically important who may have no intention of repaying the loan. Add this to the inherent risk of loss associated with agricultural production credit and you have a weak basis for creating a sustainable program in the absence of substantial collateral or mutual guarantees.

Perhaps the most promising approach to providing financing for livestock exports comes from the CLUSA supported cooperative capacity building program in Sikasso. Through local NGOs the program organizes village associations and groups of producers into secondary structures that can access credit, combine purchases, aggregate sales and carry out other activities where there is strength in numbers. It provides training in management, helps them prepare business plans and obtain funding for those plans, and monitors execution of the plans. Because of the support of CLUSA, constitution of a capital stock and jointly guaranteeing loans to the secondary structure, they have been able to access credit from BNDP and local micro-finance institutions. The amount of credit is sometimes quite sizeable: averaging $4000 each for more than 160 community organizations and producer groups. The loans cover such things as bulk purchasing inputs for sale to members and marketing their output. One association of 95 cooperative members (SOGEMAF) engaged in cattle production and trading sold over 10,500 head of cattle through the frontier market at Sikasso. These can be sizeable undertakings. The fact that each consists of dozens of individual members of modest means serves to distribute the benefits more widely and better support USAID's poverty alleviation goals.

When producers organize into larger associations the need for financing fattening and trading activities may actually be much smaller than the same activity undertaken by an individual trader. The individual trader must take possession of the animal and pay for it before he can fatten or trade it. When the same activities are undertaken by a producer organization the individual member who supplies the animal need not be paid for his animal until the fattening operation and the ultimate sale is completed. In effect each producer finances in kind his contribution to the cooperative undertaking. The more modest cash capital contribution, perhaps supplemented with a loan from a micro-finance or other credit institution, can then be used for operating expenses for the venture. The same principal can be applied to forward sales of cereals to feed operators or for grain storage and speculation. With a small up-front payment to secure the contract or finance the cash needed by the farmer to cover immediate cash needs, the actual feed ingredient can remain in storage on the farm or in a community structure. It has to sit somewhere until it is consumed several months later; why not on the farm so the farmer can collect the storage premium. This approach can be used to good advantage to develop forward contracts between producers and market intermediaries who lack sufficient capital to acquire all they can sell or all they need. In a well structured contract, farmers should be able to get both a modest up front payment and a substantial portion of the gains from storage on grain they would otherwise sell at harvest for a much lower price. Developing and promoting such forward contracting, though it would logically fall under IR 3 activities, will do a lot to promote IR 2 as well.

Inadequate Frontier Market Facilities

Mali has already embarked on a program of creating or reinforcing frontier markets in order to facilitate cross border trade in livestock. This program needs to continue to develop with support from IR 2, especially in areas not currently served. These markets facilitate the exchange of livestock from the nationals of one country to those of another at a place that leaves to each responsibility for dealing with customs and other officials from his own country. The new market being developed near the border with Guinea and the frontier market at Sikasso are examples. These markets are being designed to be run by producer organizations on a self-financing basis. Although this may reduce somewhat the profit per animal that would accrue to Mali traders who deliver the animals to the respective regional destination, it will free them up to deliver more animals to the frontier market. It may also increase somewhat the price they receive for livestock sold at the border market if national traders are less subject to illicit taxes and harassment than Mali traders, and the trade associations succeed in creating broad interest in such markets.

Slow and Cumbersome Bank Transfers of Funds

Formal trade in livestock will begin working well when an exporter in Mali can contract with a buyer in another country, contract with a transporter for delivery to the buyer, and then have an agent turn the animals over to the buyer when his bank approves payment for the shipment. As far as we can tell, no one trades livestock this way at the present. International letters of credit that guarantee payment against delivery are not widely used for livestock, and the more simple process of simply transferring money is reported to take weeks. It doesn't take a very high opportunity cost of capital to make such a cumbersome process unacceptable to traders.

Streamlining banking procedures is not easy in any environment. It can't be done for international exchanges without involving more than one country. Procedures are cumbersome because of multiple checks and balances intended to prevent fraud and theft. Changing them will require time and a long-term commitment to change. This is the kind of change that a 10 year strategy can hope to deliver. It will require a regional approach in conjunction with WARP.

Streamlining the international bank transfer process should prove especially helpful for transfers between Mali and non-WAEMU countries. At the present time a volatile exchange rate between Ghana and the FCFA is reported to constitute a barrier to increasing trade with Ghana, at one time an important market for Mali livestock. The cedi depreciated 37% against the dollar in 2000, but had moderated to a drop of only 18% in 2001 and 10% so far in 2002. With a 37% change in 12 months, bank transfers that take weeks can result in major surprises as to the proceeds of foreign exchange transactions actually received into the seller account.

It is likely that currency volatility and cumbersome transfer procedures are not the only issue in developing livestock trade with Ghana. Ghana's position outside WEAMU means Mali does not benefit from tariff protection the same as within WAEMU. The high WAEMU tariff inflates prices for Mali red meat relative to world market prices. Moreover, Ghana imports large quantities of cheap poultry and turkey parts from the US. It may very well be that Ghanaians are just not willing to pay enough for Mali beef to ensure a profit for traders who must purchase at prices that prevail on markets within Mali. If true, livestock prices in Mali will have to fall relative to world prices before trade with Ghana will become substantial.

Factors Which Limit Flexibility

No Capacity for Red Meat Exports

Markets appear to exist, in the Middle East, Gabon and possibly Ghana, for fresh meat exports from Mali. At the present time, however, Mali does not have a functioning capacity to market fresh meat. Markets outside the region may not be an economic outlet for Mali red meat at the present time due to the very high demand from within WAEMU, where the CET and other duties keep Mali livestock prices well above world market prices. But this could change very quickly, especially if markets in Ivory Coast are disrupted for a prolonged period. Mali needs an infrastructure for exporting fresh meat to provide greater flexibility for responding to market disruptions. It doesn't have to be large, and it can be designed to operate 24 hours per day when prices and demand warrant. Such a facility could serve the domestic market as well, but its importance to the export market for meat suggests that support for it should come from an IR 2 activity.

Given the significantly higher value of the fifth quarter in coastal cities, red meat exports do not appear to be as economic as live animal exports at this time, even within WAEMU. However, that may well change over the next year if events in Ivory Coast do not settle down, or in five years if cereal production in Mali increases as much as seems likely at this time and transportation infrastructure is improved. This infrastructure would likely include slaughter and cooling facilities

in Sikasso for loading onto refrigerated trucks from coastal countries coming into and leaving Mali and in Bamako for air shipment to Arab countries.

Inadequate Veterinary and Phytosanitary Controls

Exporting outside of WAEMU, especially to Arab countries will require greater attention to veterinary and animal health controls and procedures. These will take time to implement, but Mali should start now so that everything is in place within five years to ensure credible veterinary certification procedures for animals and animal products destined for export.

IV. PROGRAM FOR EXPANDING TRADE

To capitalize on the full potential of livestock and livestock products to contribute to sustainable economic growth, Mali needs to develop a more efficient and responsive live animal supply sector. This can happen by reinforcing veterinary services and strengthening input processing technology, input supply markets and input quality on the one hand, and animal production technology, management and marketing on the other. Following are some specific actions that appear to offer meaningful potential for accomplishing this. These actions run across all three IRs, but are essential for trade in livestock and meat to expand to its full potential.

Assist Trade Associations to Become Viable Forces for Market Development and Change

Trade associations oriented toward export trade can become a viable exchange or clearing house for regional and international meat and livestock transactions, an effective lobbyist for the goals of association members, a source of guarantee for completion of contracts accepted by members through the association, a source of market intelligence for its members and a force to be reckoned with by government officials misusing their powers. As such, they can provide short-term solutions to several of the more serious problems constraining livestock exports from Mali.

There are two national level trade associations for livestock in Mali, FEBEVIM (La Federation des Groupements Interprofessionells du Betail et de la Viande au Mali) which works only with livestock operators, and CONOESAM (Coordination Nationale des Operateurs Economiques du Secteur Agro-alimentaire), which works with trade associations in four areas: livestock/meat, cereals, fruits/vegetables and fish. FEBEVIM was created by the Chambers of Agriculture of Mali in 1998 to represent the various associations of producers, traders, exporters and butchers of livestock that cover virtually every livestock and meat market in Mali. CONOESAM is the national association that grew out of a regional network of agricultural producers, processors and traders concerned with developing national market information systems (SIM). These SIMs, of which OMA (Observatoire des Marches Agricoles) is one, collect and disseminate, both nationally and to each other, price and quantity data on important commodities traded in major national and regional markets. The regional network, ROSESAO (Reseau des Operateurs Economiques du Secteur Agro-alimentaire de l'Afrique de l'Ouest), and the respective national CONOESAMs were formed in 2001 by participants at an annual conference of the national SIMs.

The stated function of ROSESAO and CONOESAM is to reinforce the capacity within the region to collect and exchange information on the supply of, and demand for, agricultural products and related trade opportunities, organizing workshops to support members, and providing publicity and public relations for the agribusiness sector. FEBEVIM is a member of CONOESAM, and has a more national mandate, but there is a lot of duplication in what each does and a lot of unhealthy competition for terrain and power between them. Logically it would seem that FEBEVIM would be the livestock and meat division of CONOESAM, and would broaden its official role to include information sharing across the ROSESAO network.

As with the price reporting function of OMA, there is a conflict between the transparency sought for a national price reporting service and the proprietary nature of market information sought by traders. But there is also a lot to be gained by traders from even public information of the kind provided by the SIMs. Perhaps most important for expanding trade, is the opportunity the networks provide for traders in different countries to communicate with each other regarding marketing opportunities. For example, in the past three years there have been several instances where information provided across the network or exchanged via the annual workshops resulted in exports of more than 50,000 tons of cereals and several hundred head of cattle. There are also cases where the association was able to provide a letter for traders that served as a laissez passez around road and border checkpoints without hassle. Clearly, these networks have potential for expanding trade and overcoming some of the most serious bottlenecks that exist at the present time.

Under IR 2 these trade associations should be encouraged and helped to develop this potential. A trade capacity building program for the producer association responsible for livestock would consist of four activities. One would be development of regular communications with national members and with economic operators in the livestock subsector in neighboring countries. This component would focus on both the physical communications infrastructure to do this and the content of the communications. At a minimum, these communications should inform members of current activities and progress toward implementation of the other three components of the program. The infrastructure would include a web site for posting offers to buy or sell livestock and livestock feed, post the terms and conditions of all sales, and connect buyers with sellers. The web site would include a facility for member feedback, essentially directing such feedback to specific mailboxes dealing with each commodity.

The second component of the capacity building program would be development of formal procedures and security mechanisms for contracting via the association by its members, and between its members and traders and producers in other countries. Until those other countries have viable producer associations that can interact and contract with the Mali association, foreign traders would be required to post the same type of security and in the same amount as national traders operating within the association. The procedures would deal with such issues as when, how, and how much security to post to guarantee execution of the contracts entered into through the association, how bid and offer prices and quantities will be posted and acted upon, the grading standards to be adopted and enforced, the consequences of failing to deliver on the contract as promised, and how payment will be made.

A third component would reinforce the market price collection activities both within Mali and in neighboring countries. This may require separate contracts with the Mali association and with Mali's trading partners, the latter probably through WARP. This component should also include development of internet based information dissemination and storage, and should provide some analysis of national and regional market trends and market moving news. Members themselves should be able to post newsworthy items, though they should be clearly identified as member provided.

The fourth component should include public education, lobbying and monitoring market conduct,

regulation and market interfering activities by governments and their employees. It would support the ClLSS effort to monitor illicit market interference (L'observatoire des pratiques anormale) and provide for widespread dissemination to newspapers and governments of the results on a periodic basis in order to build moral pressure to reduce illegal interference by governments in marketing activities. Through links with newspapers and key political leaders in the respective countries it would, hopefully, become a powerful force for transparency and reform by making it difficult for leaders to hid from unpleasant publicity relating to interference in the flow of trade. This activity should be done through WARP so that both national and regional market channels are covered.

USAID should have no illusions how difficult it will be to forge CONOESAM and FEBEVIM into an organization that can effectively promote export trade. Both organizations have been operating for two years or more and have mostly anecdotal successes that appear more serendipity than planned. Its one thing to organize livestock sector participants to establish themselves as political force to be reckoned with, with the goal of carrying weight in trade channels; its quite another to serve as a clearing house and guarantor for orders for livestock and meat among members. The former, though not an insignificant accomplishment, should result from the economic and political power of traders and merchants, and their acceptable social status in the post liberalization economy. As the authority and power of the organization becomes established, as it will if it becomes a major player in formal market channels, lower level government agents should become more hesitant to extort payments or to otherwise harass shipments of agricultural commodities by members of the association.

Serving as a reservoir and clearing house for orders of livestock products requires confronting and resolving issues related to ventilating market information and orders, and establishing and managing a system for filling those orders by members. It will require finding ways to guarantee performance and delivery on contracts between members and ways to allocate losses when performance is not forthcoming as contracted. All of this must be accomplished in the context of an organization where members do not know each other, are competitors with each other professionally, do not want to share information, and where commercial law provides little guarantee of contract enforcement. It can be done. But it won't be easy, especially without the ultimate sanction of contract enforcement through the effective application of commercial law. Obviously, commercial law reform is a key component of virtually every trade related transaction.

Support the Evolution of Village Associations, Producer Enterprises and Cooperative Organizations into Apex Input Supply, Storage and Marketing Organizations

These are the same issues as for cereals. The study suggested in the cereals annex should include livestock in its scope.

Support Livestock Feed Production, Marketing and Export

USAID should continue to provide support to feed mills regarding composition of rations, appropriate technology and marketing under its IR 1 program. CAE or a structure like it, more focused toward export activities, is what is needed to do this. The support program should be broadened to include setting up contracts with producer associations for forward delivery of feed

components and helping feed mills develop approaches for providing extension support and marketing advice for their customers. This should be done in conjunction with the IR 3 financing initiatives directed at developing financing mechanisms for promoting trade. These initiatives should include forward contracting between producers and feed mills, as well as providing financing to the feed mills to be able to carry adequate feedstocks to ensure year-round supplies at reasonable prices.

USAID should support proper analysis, packaging and labeling of livestock feeds. It should support legislation requiring labeling of all livestock feed sold in bags and providing for a legal cause of action by a purchaser against a manufacturer for mislabeled feed. This could be part of a commercial law reform activity with much broader scope, including protection of trademarks.

Support Development of Export Infrastructure

USAID should support continued and more rapid development of frontier livestock markets at key export points. This is clearly an IR 2 activity. These markets should include paddocks and pasture for holding stock, water, supplemental feed sources, veterinary, inspection and customs services required for exports, shelter for traders, and vehicle repair services, all on a fee for service basis oriented toward full private sector support for all but government services. To accomplish this and to reinforce its efforts to forge a dynamic producer association for livestock producers and exporters, the contract to implement this should be part of the contract to support trade associations. This will give the association real credibility with its members and will ally its interests more closely with those of the public sector with respect to promoting formal trade between Mali and its neighbors. There appears to be ample expertise within MDRE to implement this aspect of the program with minimal technical support from USAID.

USAID should be prepared to encourage development of infrastructure for facilitating meat exports from Bamako to countries in the region where markets for live animals are problematic and when prices and demand warrant. This will likely include facilitating investment in cooling facilities in Sikasso for loading onto refrigerated trucks from coastal countries coming into and leaving Mali; and in Bamako for air shipment to Arab countries at some future date. This does not appear to be a high priority at the present time due to the high price of Mali beef compared to world market prices. USAID should reexamine this option in four or five years in light of events at that time.

Reduce Transport Costs

Support the development of a freight clearing exchange (Bourse de fret) to arrange back haul loads for trucks exporting agricultural goods from Mali. This would include reporting on back hauls available for both live animal trucks from Mali and refrigerated trucks from coastal capitals. This is an IR 2 activity and could be attached to the Support to Trade Associations component.

Provide Support to Regional Activities

Support a WARP effort to study, reform, streamline and greatly expedite the process of transferring the proceeds of international transactions through the formal banking system.

Support a WARP program to assist the national market information systems (SIMs) develop an internet based platform for providing more timely and more complete information to their regional counterparts on cereals and oilseeds, and to add price and quantity information from assembly markets for livestock and cereals to the information being collected and disseminated.

Support commercial law reform so that commercial contracts can be enforced in a reasonable time with a reasonably predictable and reasonably just outcome. All interventions under this heading would be IR 2 activities.

Target Support toward Women Wherever Possible

At the present time there appears to be little involvement of women in trade and exports of livestock. Women are active in retail sales of meat, especially sales in smaller quantities and sales of offal, and in sale of milk. But few appear to have the financial means or the cultural background to become important direct players in meat and livestock exports. Efforts to incorporate women in the program to expand agricultural exports will probably be more fruitful if they focus on production and marketing directed at export markets rather than on the export trade itself.

The analysis by Diarra (1997) suggests that, at a minimum, fattening small ruminants is at least as profitable as fattening cattle. Small ruminants are less expensive than cattle and take less work to feed. Their smaller size and lower feeding and financing requirements make them an excellent source of income for women of modest means, especially since women process grains for household consumption and control production of household agricultural by-products. Although we found no data on the extent of women's involvement in small ruminant fattening, there is plenty of anecdotal evidence that it is substantial. Typically, fattening of small ruminants done by women is done in one to three animal lots, well within the means of a women's group or savings club to finance. This makes fattening small ruminants an especially attractive activity for achieving the mission's gender objectives.

With livestock in Mali, the real profits come not so much from raising the animals, as from feeding and fattening them over the dry season or prior to major religious holidays, when prices increase sharply over a few months. Many of these animals find their way into export channels and contribute to expanded exports. For women of modest means to participate in this market they may require access to credit for purchase of feeders and/or feedstuffs. To promote such activities one can certainly conceive of a CLUSA type apex organization providing integrated services to its members that include purchasing feeder stock, organizing forward contracts for the sale of component feed stocks to a local feed mill, financing by member credit associations for the purchase of animals and feed by other members, providing extension support in small ruminant feeding and veterinary services financed, in part, through sales of feed and vaccines to its members

in certain targeted areas of concentration, negotiating a group sale of animals from several members with exporters, or perhaps, hiring a truck and delivering animals to wholesale markets in other countries themselves. Most of this is already being done in Sikasso under the CLUSA contract, except that it is not targeted towards women or small ruminants.

Because access to resources is such a critical constraint on rural development and on development for women, in particular, programs to address this constraint require a multi-faceted approach including assistance with production (extension), financing, feed supply and marketing. Such an activity would have more to do with IR 1 than with IR 2 or IR 3, but would certainly require input from an IR 3 activity and would require focus from IR 2 if it is to be targeted toward exports as much as possible.

V. TECHNICAL ASSISTANCE REQUIRED

Assistance to Trade associations should include pressure to merge the two working with livestock. The major challenge is to provide the initial manpower and drive needed to get the association up and running to the point where it is providing services that members are willing to pay for. One possibility would be an arrangement, much like the current MSU cooperative agreement, which would provide support to all of the SIMs and sister trade associations in other countries in the network, assist with installation of internet-based reporting and communication systems, and promote coordination and compatibility of the reporting systems with each other. In addition, processes need to be created for developing and testing systems for entering and filling orders for commodities, establishing contract performance standards and specifications and procedures for settling contract disputes within the structure of the association rather than through the commercial court system. The trade associations will also need the services of internet and database specialists on a part-time basis in order to continue development of the systems and link them together.

Support of village associations, producer enterprises and cooperative organizations for developing apex structures and forward contracting capabilities could be done in much the same way as the current CLUSA cooperative agreement, probably under IR 3, with a broader mandate to experiment with innovative approaches to capital formation. There should be close ties structured into this support requiring collaboration and joint experimentation between the trade program product specialists, and the organizations implementing support for the village level groups. With the confidence of approach that should come from the analysis of all such activities in Mali proposed in the coarse grains annex, the scope of such support, both from USAID and other donors could be expanded considerably. This may require input from more participating Mali NGOs.

Support to livestock feed mills is another major priority, along with providing assistance with production technology in other areas, much as is being done by CAE at the present time, but with a narrower focus on export promoting activities. Another area of focus should be poultry feeding, animal fattening and downstream operations, including the establishment of border facilities, market analysis and market development, including prospects for meat exports and helping to establish the infrastructure necessary to respond to orders for red meat exports. Over the next ten years this industry will be transformed from one based on agricultural by-products to one based on manufactured maize-based feeds and, hopefully, private extension services operated by the feed mills. Although the key to the success of this transition is the price of maize, many improvements are needed in livestock feeds, livestock fattening operations and marketing before these producers can be competitive with global meat suppliers in the coastal markets.

Mali Trade Development Program
Contract #PCE-I-812-98-00014-00
Final Report

ANNEX B

PRODUCTION AND EXPORT OPPORTUNITIES AND CONSTRAINTS FOR COARSE GRAINS

CARANA
CORPORATION

I. THE CASE FOR GRAIN EXPORTS

Evolution of Production: 1985 - 2001

Over the 1984-2001 time period, total cereals production in Mali increased by 3.6% per year, meaningfully higher than overall population growth of 2.0% (Table C-1)[1]. Performance by type of cereal differed markedly. For rice, the growth rate was 9.3% per year. For maize it was 3.4% per year, and that includes a sharp falloff in production during the last two years and leaves the very poor results for 1984-85 out of the base. Wheat production grew at-an even faster rate, nearly 13% per year, although from a very small base. During this period, millet production remained virtually static, while sorghum production grew at 2% per year. Most of the growth in sorghum production occurred prior to devaluation. Since the devaluation sorghum production has, in fact, declined 4.7% per annum. Whereas millet and sorghum accounted for 78% of total cereals production in the 1984-86 period, it accounted for only 50% in 2001-2002. And whereas maize accounted for less than 10% of coarse grain production in 1984-86, by 1999-2002 it accounted for nearly 20%. Clearly there is very substantial substitution going on between maize and rice on the one hand, and millet and sorghum on the other. This substitution appears to have accelerated since devaluation.

The very rapid growth rates in rice, maize and wheat production, if they can be sustained, create the foundation for Mali to become a significant exporter of cereals in the not too distant future. For all three commodities there is a significant body of germ plasm and research that can stimulate yield increases and increases in productivity of land and labor. All three crops are grown under conditions that are favorable for continued expansion: rice in the Office du Niger, wheat in the north, with potential for double cropping with certain varieties of rice under full water control systems, and maize in the relatively well watered south. The potential for rice production and exports is discussed in Annex C. In this annex we discuss coarse grains: maize, millet and sorghum.

Yields for coarse grains as a group have essentially been stagnant since 1984-85, pretty much following rainfall levels in the interim. The slight declines in yields over the 1984-2001 period indicated in Table C-1 reflect low levels of rainfall in the past two years more than anything else. There does appear to be an increase in yields in the years immediately following devaluation, beyond that which can be explained by increases in rainfall alone. This indicates that the higher cereals prices following devaluation stimulated intensification of production, for a while, at least. Still, these data suggest that, on balance, increases in production of coarse grains over this 15 year period have arisen largely from expansion of the total area cultivated, approximately 2.6% per year. On just this basis there is not a lot of reason to believe that coarse grains will become

[1] In Table C-1 the base is not the same for every cereal. Weather and other factors do not operate the same on each crop. Moreover there are clearly anomalies in the data. These are administrative data, not sample data. As a consequence they are subject to a great deal of judgement. The base period used for each crop is noted under production, and is selected so as to represent more accurately the real trend for each cereal. This is necessitated by the tremendous fluctuation in production that arises from rainfall each year.

important export crops, except to the extent that increased rice production shifts consumer preferences away from coarse grains and pushes that production into export markets. However, a closer look at maize suggests that such a conclusion may too pessimistic.

SEE ATTACHED TABLE B-1 (SEPARATE DOCUMENT)

Maize yields have been on a roller coaster ride since 1984, responding to more factors than just rainfall. Early in the period maize yields exceeded 1.5 tons/ha., when rainfall was below normal, only to fall to close to 1.1 tons/ha just before devaluation when cereals prices were very low. They then increased quite sharply following devaluation, only to decline even more sharply over the past three years as rainfall has declined, and perhaps more importantly, as problems in the cotton sector have spilled over into maize production.

Maize is grown primarily in rotation with cotton. It has benefited from tremendous support from the extension, capital investment, input supply and credit services provided by CMDT and OHVN to cotton producers. Cotton area has grown over 7% per year for the past 17 years; maize area has grown about half that. Maize benefits from residual fertilizer left in the ground from the cotton campaign, as well as from access to animal traction for expanding area under cultivation and to credit for fertilizer for direct application to maize. The excellent long run export potential for cotton suggests that maize production should continue to expand along with cotton production, providing substantial quantities of maize and its substitutes, millet and sorghum, for export. This, coupled with increased production of rice, should exert strong downward pressure on coarse grain prices once regional demand is satisfied at current prices.

The agricultural production side of CMDT operations is widely regarded as having been very effective in increasing cotton and maize production and promoting broad based rural development in those areas where CMDT operates. However, issues related to its high processing costs for cotton, pricing of seed cotton and the sweetheart relationship with HUICOMA, the cottonseed processing operation, have given rise to calls for liberalization of the cotton sector. There is a danger that the baby may be thrown out with the bath water. The one thing that could abort the fairly optimistic scenario we have painted for cereals production would be a poorly thought out and poorly designed transition to a more liberal cotton sector. Markets in the sector may not be well enough developed to absorb all of what will be expected of them in the short run if a full-scale liberalization occurs too quickly. It may be wiser to focus on those issues that are problematic at the present time - processing costs, pricing of seed cotton and cotton seed, and the preferential position given to HUICOMA for cottonseed - and move more cautiously on the production and extension side, which appears to be working much better, indeed over time, has been working extremely well.

The close links between maize and cotton with respect to potential exports of cereals can be better appreciated by examining the drop in maize production and area during the past two years, and how farmers and the markets have responded. The drop appears to be closely linked with producer prices for cotton and how those prices are set.

Producer prices for cotton have traditionally been set in October, long after land preparation and planting have been completed. Low world market prices for cotton lint in 1998 and 1999 contributed to large CMDT operating deficits and led to a drop in the producer price from 185 FCFA/kg. of seed cotton in 1998-99 to 150 FCFA for 1999-2000[2]. In addition, some 30,000 hectares of cotton were flooded after planting in 1999, with a complete loss of the inputs used. This cut cotton production by about 10% and led to a crisis for the credit program since farmers affected by the flooding did not have the wherewithal to pay for the lost inputs. The following year, 2000-2001 saw producers threaten to not plant cotton if the price was not increased from the prior year. The debate over the price continued until it was too late to plant either cotton or maize, and production of both dropped sharply. The price was finally set at 160 FCFA/kg, plus the dividend, which finally came in at 10 FCFA. The following year the price was set at 200 FCFA/kg., before planting and well above world prices.[3] This led to a sharp rebound in cotton production in 2001-2002, a diversion of land and other resources from maize to cotton, and sharply higher consumer prices for coarse grains.

Land diverted from maize to cotton in 2001-2002 was some of the most productive and the heaviest user of fertilizer. Moreover, the emphasis on cotton by farmers caused delays in planting maize, some of which never got planted because of deteriorating rainfall conditions as the season progressed. As a result, both the area planted in maize and average maize yields dropped sharply from pre-crisis years. This was in spite of the fact that maize and coarse grain prices were at near record highs *at planting time*.

This experience with maize and cotton over the 2000-2002 period demonstrates several points that have a major bearing on how much coarse grains will contribute to exports from Mali over the next ten years. Perhaps most important is that there is considerable substitution between maize and cotton in the wetter parts of the country, even though the technical package promoted by CMDT and OHVN emphasizes rotation of maize and cotton in order to better utilize residual fertilizer left from the cotton crop. This is important because, based on data analyzed by HORUS Enterprises/SERNES (2001) and Timbo, Diakite and Metzel (1999), about one year in five Mali's cotton is not competitive on world markets at a producer price of 175 FCFA/kg or higher, when cotton seed is valued at export parity (72 FCFA/kg). Moreover, unless cost reductions are realized somewhere along the production/processing/marketing chain, in addition to those already in process at the ginning and administrative end of CMDT, Mali's cotton will become less competitive on world markets as other countries continue to introduce higher yielding, more disease resistant varieties.

[2] The 150 FCFA paid in 1999-2000 was actually 145 FCFA for the base price for 1999-2000 and a 5 FCFA/kg. dividend from 1998-99. The price received by producers is actually a combination of a base price for the current year and a dividend from the previous production campaign. Because both are paid around the same time, most farmers percieve the total as the price for the current year.

[3] This was a political decision by government and is certain to aggravate the commercial losses of CMDT. World market prices for cotton lint in April, 2001 would have suggested a producer price of no more than 165 FCFA/kg., assuming cottonseed is sold at market prices, which it is not.

The ability and willingness of farmers to switch between cotton and maize means that, with liberalized markets, in years when world market (and therefore producer) prices for cotton are low, if the price is communicated to farmers early enough, and weather conditions permit, they can shift to maize and sorghum. In 2001-2002 that would have meant a much reduced subsidy to cotton farmers, lower prices for coarse grains throughout the region, much higher coarse grain exports and more poverty alleviation for consumers of coarse grains. Cotton farmers, of course, would have suffered because of the loss of the subsidy, and coarse grain producers would have suffered to the extent they sell their grain. But the benefit to the government, the economy and consumers would have far outweighed those losses.

A second point demonstrated by this experience is the supply responsiveness of maize to cotton prices and the willingness of farmers to apply (or not apply) fertilizer to maize when relative prices warrant. This suggests that in any liberalized market structure for cotton, thought must be given to how farmers will acquire fertilizer, animal traction equipment and other inputs for cereals as well as for cotton. If not handled properly, liberalization of cotton production and marketing threatens to have a very negative impact on production of maize and availability of coarse grains for export, not to mention a negative impact on cotton production. It also suggests that reducing the cost and increasing the cost-effectiveness of fertilizer in Mali should have a high priority in any export led strategy of agricultural development. This should, at a minimum, include exempting fertilizer from the value added tax.

A third point is how integrated cereals markets across the sahelian region have become with the creation of WAEMU and the CET. This is clear from FEWS monthly reports on the state of the harvest (FEWS, 2002). In spite of an abundant harvest of coarse grains in 1999-2000, producer prices held steady throughout 2000, first because of increasing exports to neighboring countries that had experienced less favorable results, and then because of the unfolding cotton unrest. Following the harvest in 2000-2001 they continued to rise due to massive exports and low carryovers from the previous year. The increases continued throughout the cultivating season of 2001 as farmers gave higher priority to cotton than maize and sorghum. After a break for a couple of months at harvest time, post harvest prices rebounded even though harvests in neighboring countries were good, and in Mali the coarse grain harvest was nearly 5% higher than the year before. According to FEWS this increase was induced, in part, by cotton farmers holding their grain off the market because they received the first payment for cotton early and did not need to sell their grain to obtain cash for needs that had accumulated over the cultivation season. In effect, farmers were engaging in grain speculation with their cotton income.

The higher prices were sufficient to induce imports into Mali of coarse grain from neighboring countries, some of which, apparently, had been exported from Mali earlier in the year. So far in 2002, FEWS estimates that 166,000 tons of millet, sorghum and maize have been exported to neighboring countries, 66,000 tons of which went to Senegal where rainfall in the peanut basin has been the lowest in several decades. The late onset of the second rainy season in coastal Ivory Coast is giving rise to expectations of continued pressure on cereals prices in Mali for 2002-2003. All of this has kept coarse grains prices high in Mali. Table C-2 shows how this played out on prices for millet in Segou consumer markets; Segou is the main producing area for millet.

So, while there appears to be considerable potential for Mali to continue to expand production of maize, how well it succeeds may have more to do with actions directed at cotton than with actions directed at maize production in the strict sense. Should Mali succeed at continuing the rate of increase in maize production of the past 17 years, and should increases in rice production continue their torrid pace, then there is little doubt that either exports of cereals from Mali will mushroom, cereals prices in Mali will decline rather sharply, or, more likely, some combination of the two will stimulate both producer and consumer incomes and substantially expand both cereals and livestock exports.

TABLE C-2: MILLET PRICES IN SEGOU CONSUMER MARKETS: 1998-2002
(FCFA/Kilo)

Month	1996-2000 Average	1998	1999	2000	2001	2002	
Jan	91	91	100	61	80	131	
Feb	91	92	100	61	93	137	*
Mar	94	101	100	61	103	148	*
Apr	97	119	100	62	134	159	*
May	105	140	100	60	126	162	*
June	105	129	100	62	125	163	
July	113	147	105	62	140	175	*
Aug	119	161	100	70	150		
Sept	111	158	87	62	158		
Oct	110	163	88	69	155		
Nov	101	125	80	84	125		
Dec	92	104	76	80	105		

* Interpolated from price graph
Source: FEWS Monthly Reports

Exports of Coarse Grains: 1990 - 2002

Tyner et al. (2002) note that Mali has a comparative advantage in the production of coarse grains for export to regional markets. They attribute this advantage to the low input/output nature of cereals production in Mali that relies heavily on family labor and land. They note availability of seed, fertilizer and water retention technical packages for maize and sorghum that could increase yields considerably in a relatively short time. This suggests that Mali's farmers can, potentially at least, respond to expanded export opportunities with increased production.

Mali is already one of the main suppliers of coarse grains for regional markets. Most exports of coarse grains from Mali are unofficial and the amounts are not known. Coarse grains move back and forth across the borders of neighboring countries in response to relative prices, sometimes returning to Mali during the same season, as deficits in regional rainfall cause shortfalls in

production in one area or another. Table C-3 shows official exports, including those for rice, over the past 11 years. Unofficial exports are thought to be a multiple of those. Millet has traditionally been the leader, but all four cereals have seen increases in official exports since 1999. Against these data place the FEWS reports that exports of cereals from Mali increased significantly during the 2000-2002 period, and that 166,000 tons of millet, sorghum and maize have been exported to neighboring countries so far in 2002. Taken together with the production data in Table C-1, they suggest that Mali may be on the threshold of a take-off in exports of cereals.

Although maize has not been an important export crop, that could be changing. Maize is typically the cheaper of the three grains[4] and has been steadily pushing its way into local and regional diets. The fact that it has much greater yield potential than millet or sorghum under intensive cultivation suggests that this transition will continue, especially if fertilizer can be made available in key production areas in a form and at a cost that provides farmers with adequate incentive to use it. Increasing production of maize relative to millet and sorghum will also push more millet and sorghum into regional export markets where maize is either relatively more plentiful (southern coastal countries), or where it is too dry to grow much maize (Senegal). Eventually, maize production will increase enough to push coarse grain prices lower on a secular basis, drought years excepted, of course.

TABLE C-3: EXPORTS OF CEREALS FROM MALI:
1990 - 2001
(Metric Tons)

Year	Millet	Sorghum	Maize	Rice
1990	7219	114	715	116
1991	3150	112	730	110
1992	5755	136	660	201
1993	3941	248	760	160
1994	3361	376	1904	185
1995	5055	440	1740	192
1996	7221	233	1680	200
1997	7850	233	1568	182
1998	8031	301	1563	109
1999	11801	380	1755	207
2000	7592	3254	8321	2336
2001	27292	888	6898	2336

Source: Diakite, 2002

According to FAO data, imports of maize into Guinee exceeded 25,000 tons in each of 1997 and 1998, the most recent period for which data were available (Conseil, 2001). Imports into

[4] Market prices for maize, sorghum and millet follow each other very closely, and are, typically, not that different from each other. Millet is usually the most expensive of the three cereals, about 4% more than sorghum and 7% more than maize at the retail level, according to 10 year data provided by Tyner et al.(2002).

Senegal, though volatile, averaged nearly 50,000 tons per year over the same period. Imports into Niger were 16,600 tons in 1998, but were negligible in prior years. They were also negligible into the other WAEMU countries. Imports of millet and sorghum were negligible into all WAEMU countries. These statistics serve more to confirm the importance of the informal market for moving coarse grains across the region than to accurately portray the level of trade. They do, however, probably give a pretty good idea of which countries are chronic production deficit areas.

Maize has potential for export from Mali to all of theses countries as a component in a quality, balanced livestock feed. However, before livestock feed exports will make much headway, livestock feed costs must decline, even as its quality improves. To achieve this, production and storage of maize must increase sufficiently to drive maize prices considerably lower during the hot dry season than they are in most years at the present time. It will also be difficult to sustain high levels of feed exports if feed costs fluctuate widely over the production season as they do now. At prices that prevail for maize during the typical hot dry season, it is not economic to feed maize to livestock. Both increased production and improved storage for maize by feed producers can help solve this problem. So will maintaining the orientation of ruminant feeding operations toward seasonal feeding that capitalizes on seasonal price changes in livestock and minimizes supplemental feeding when feed costs are high.

Increasing maize production will be critical for Mali to be able to sustain high levels of livestock exports over the long term. Currently, most seasonal fattening operations utilize cereal and other agricultural by-products rather than more expensive whole grains to supplement locally available forage. This works well on a small, dispersed scale. But there is simply are not enough by-products to go around for larger operations. Moreover, most by-products do not supply the energy needed for efficient weight gains under intensive feeding programs. This is especially true of intensive poultry production. If maize is to make a significant contribution to livestock exports at current, and likely future prices for red meat in nearby countries, maize production must increase enough to drive down coarse grain prices so that it is at least economic to provide supplemental feed to breeding stock over the hot dry season. If the cotton production program maintains its momentum, increased production of maize will probably begin putting downward pressure on prices for all coarse cereals in the not too distant future. Lower coarse grain prices will lower the opportunity cost of planted pasture. This is critical since planted pasture will become important to sustaining livestock production as communal pasture land becomes increasingly scarce in the high potential areas of the country.

Apart from its potential in livestock feed, increased production of maize and sorghum in Mali will serve primarily to increase food security in the central WAEMU area via lower prices for coarse grains across the region. These lower prices will stimulate the livestock feeding and export industry in Mali and nearby countries in years of plentiful supplies. But in years of poor rainfall, higher prices will draw the maize away from livestock toward human consumption. Thus, developing a substantial livestock feeding industry based on cheap maize provides a way of earning foreign exchange from coarse grains when supplies are plentiful, while creating a silent reserve for human consumption in years of poor rainfall. This contributes directly to USAID's poverty alleviation and to Mali’s food security objectives.

If USAID agrees that increased maize production is a cornerstone of increasing sustainable livestock production and exports, then it may need to revisit the indicators for IR1. It would seem that a more direct indicator relating to intended coarse grain production would be in order. Hectares planted to coarse grains, with a goal of maintaining the 2.6% growth rate of the past 15 years would be a reasonable target. On the other hand, if USAID becomes directly involved in increasing maize production through use of fertilizer and other intensification technologies, then a maize production measure would be more appropriate.

II. CURRENT TRADE CHANNELS FOR COARSE GRAINS: DOMESTIC, REGIONAL AND INTERNATIONAL

Coarse grain marketing in Mali is now handled entirely by the private sector. Grains pass from producers to collectors/bulkers/semi-wholesalers to wholesalers and from there to domestic retail or regional and international wholesale markets. Wholesale traders typically have correspondents in particular smaller markets and smaller towns with whom they work on a regular basis and who provide local market information to the trader. These may be other wholesalers or collectors/semi-wholesalers. When the trader sees an opportunity he communicates an order to the correspondent, typically by cell phone, who then begins making purchases for his own account for sale to the trader. When the order is complete the trader sends his truck to pick up the load. Typically, the correspondent keeps any profit on the transaction over and above his anticipated margin. The trader may or may not advance money to the correspondent to make the purchase. Sales work the opposite, with the correspondent indicating a favorable market for a trade and offering to buy from the trader at a fixed price and the trader typically delivering the grain against payment after sale. Either party may initiate a transaction, depending on the opportunities he sees.

Wholesale traders are the major source of financing for course cereals trading. They finance both storage and transport. They may, in turn, seek commercial bank credit, especially when building stocks for a large order for export or for storing grain for later sale. Availability of such credit depends on their credit worthiness and/or other assets they may pledge against a line of credit; it does not appear to be common that the stored grain itself is the collateral for a grain-trading loan. There appears to be potential for providing financing to less well established traders by establishing a relationship between banks and the larger traders with their own warehouses who could supervise grain in storage for the bank so it could serve as collateral for trade financing for the smaller traders. This would require some system for making payment to the banks before releasing the grain from storage, but it would reduce the amount of personal working capital a trader would need to complete transactions.

Grain storage is provided both at the farm level by farmers and by traders in the larger towns and cities. Farm level storage has a potential advantage of lower storage losses since grain stored in unthrashed form typically stores better than threshed grain, although threshed grain is easier and less costly to treat.

International trade in course grains works much the same as domestic trade, except that the scale is larger and there are more bureaucratic obstacles to overcome. Although, in theory, transferring money across national frontiers of non-WAEMU trading partners is a problem, few grain traders seem to rely on the formal banking system for this, preferring to arrange their own financing instead. Given how cumbersome the bank transfer process is at the current time, it's hard to imagine anything that could be done over the next several years that would cause grain traders to change their approach.

More important than financing obstacles, regional export markets impose different quality standards than domestic markets, which at the present time are quite low. Some traders with contracts that impose quality standards, clean and rebag grain destined for export. USAID has been providing assistance to cereal traders through the CAE to enable them to market a higher quality product. Because of its importance to the regional grain market, some see Mali as being a good position to take the lead on establishing objective grading standards for cereals exports. If cereal production continues its historic pace, the market itself will provide the incentive and the discipline for such standards.

III. CURRENT AND LIKELY FUTURE CONSTRAINTS ON MAXIMIZING THE EXPORT POTENTIAL OF CEREALS FROM MALI

Sharp Seasonal Fluctuations in Cereals Prices

In most years, cereals prices drop substantially at harvest time, only to rise again as the harvest season becomes more distant. Prices typically continue rise to a peak during the *soudure*, a period covering the months before the first harvest when hunger is more prevalent. The tremendous fluctuation in coarse grain prices between harvest time and the *soudure* reflect, in part, an imbalance between supply and demand for cereals at harvest time, which itself has other causes. Although it is this imbalance that provides profits to traders with the capital to take advantage of this disequilibrium, it comes at the expense of farmer incomes without an offsetting benefit to consumers. If this grain is then exported at this time, Mali loses the margin for storage and speculative profits that accrues until the grain is sold. This could be as much as 30-50% of the value of grain exported near harvest time. As exports become a more important outlet for Mali's cereal surpluses, such losses in foreign exchange will increase.

A recent FEWS report (FEWS, 2002) sheds light on why this sharp drop in prices occurs at harvest time, and what can be done to reduce it. The report notes that cotton farmers held larger than normal stocks of cereals on the farm following early payment for cotton in 2001. This was one of several explanations provided to explain why prices at harvest on 2001 did not stay down following the harvest as long as in prior years. If this is correct, and it certainly seems logical, it suggests that providing farmers advance payments (loans) against grain in storage can increase the farmer's own investment in storage and grain marketing, reducing price fluctuations between harvest and the *soudure* as a result.

Typically, coarse cereals prices drop quite severely at harvest because they are the first to mature and farmers require cash for various needs that arise during the cash strapped *soudure* and early cultivation season. Making the early payment for cotton essentially pays farmers against crops in storage. This same procedure could be used for other crops, with loans or advance payments substituting for purchase payments. The CARE DAD project uses a similar approach by providing an advance payment of 30% of the value of rice put into storage, with the balance coming when the crop is sold. The CIDA PACCEM project goes a step further by providing an advance payment (credit) of 60% of the estimated harvest value of the crop, at planting time, in order to provide access to inputs and other crop expenses. This is much more than what is required for cash production costs alone, and isn't much different than paying a daily laborer at the beginning of the workweek instead of at the end. After the first time you do this, the farmers need for cash simply moves back a few months in time. Not only do large payments this far in advance create substantial moral hazard for the credit/price support program, they probably are not sustainable on any but an intensively supervised basis.

The problem of depressed prices at harvest time arises not from farmer stupidity or farmer

unwillingness to assume risk; it arises from limited capital formation in rural areas, with first harvested crops providing the quickest source of cash. If cotton were the first crop harvested and was being purchased by private traders on the open market, rather than by CMDT at a fixed price, farmers would dump it on the market and drive cotton prices down. Loans against crops in storage can provide the needed cash without removing the underlying commodity from storage. This restrains the drop in prices at harvest and provides more price stability over the entire year, other things being equal. This, in turn allows farmers to capture more of the gains from storage and trade, while reducing harvest losses since most cereals store better in unhusked form than as grain anyway. Farmers can then thresh the grain at a time when demands for their labor are less pressing and market prices are more interesting. If done on a producer association basis, the association may be able to bulk up a truck load for delivery to regional or export markets on its own when prices are higher, all financed with a single loan secured by crops in storage.

Policies Which Retard the Growth in Cotton Production

Input and extension programs centered around cotton have accounted for much of the increase in maize area over the past 15 years. Consequently, anything that threatens cotton production also threatens maize production and cereal exports.

Prices at which cottonseed is sold in Mali depress seed cotton prices and production, though less so now than in the recent past. CMDT sets artificially low prices for cottonseed and makes preferential allocations of available supplies to HUICOMA and livestock producers. In the process it has shifted income from cotton farmers to HUICOMA and to livestock producers. HUICOMA has wasted much of its added income on a bloated bureaucracy, inefficient operations and wasteful formulas for the livestock feeds it produces. Livestock producers have wasted much of their allocation on inefficient feed rations. Selling cotton seed at world market prices in 1999-2000 would have allowed an increase in the price for seed cotton paid to farmers by 25 FCFA, enough to avoid the cotton strike in 2001 and the very high consumer prices for coarse grains that followed.

High ginning costs at CMDT also reduce cotton prices since the reference price is set based on the commercial results of CMDT. These high costs reduce profits, lower the reference price, and reduce incentives to expand cotton production. Until the price gets really low, this serves to also reduce area put into maize and sorghum since maize and sorghum are grown in rotation with cotton. At very low prices for cotton, however, maize production actually increases as farmers substitute maize for cotton.

Delays in setting cotton prices and in getting ready for the cotton campaign have reduced or delayed planting of maize in the past few years, with a decidedly negative impact on maize production. This problem now seems to have been resolved.

The upcoming liberalization of the cotton sector carries many potentially negative surprises for both cotton and maize production if not well thought out and executed. The particularly difficult issues center around continuing access to inputs, credit and extension services for both cotton on the one hand, and maize and sorghum on the other, and how these would be financed and applied

in a restructured environment. Traditionally, provision of integrated services has been the really strong part of the cotton production programs. If full liberalization will make this worse for any length of time, then thought should be given to less than full liberalization, perhaps liberalizing only the processing side. In the rush to liberalize markets in Mali it is worthwhile to remember that USAID favors liberalization and privatization because we assume that free markets produce better results than managed results. While we believe that this is generally true, it is not always the case. The excellent history of CMDT on the production side of the cotton equation puts the burden of proof on the proponents of liberalization to show how it will improve production as compared to the current system. Given the importance of cotton to Mali, and to cereals production, an error of judgement or relying blindly on ideology could prove costly indeed.

Lack of Quality and Supply Assurances for Livestock Feeds

This topic is covered in Annex A. Quality and supply assurances for livestock feed are important because livestock feed appears to be able to make a meaningful contribution to increased exports of both livestock and maize as an ingredient in livestock feed. The amount of the contribution will depend, in large measure, on quality and availability issues for locally produced feeds.

Inadequate Commercial Credit for Storage and Trade

Cereal traders complain of lack of access to financing. Yet some of the larger, more successful traders seem to have little difficulty raising the capital they need, either from their own sources or from commercial banks. These traders typically use assets other than the cereals they are accumulating as collateral for their bank loans. They provide much of the liquidity in cereals trade by advancing funds to their correspondents to purchase grain for them.

Traders who seem to have the most difficult time accessing bank credit for their trading activities are those who are not yet well established or who already have bad credit. Lending to the latter is a sure road to disaster given Mali's ineffective commercial court system. They will always come out ahead with anyone crazy enough to lend them money or to guarantee their loans in the first place. There is also the head wind of the history of agricultural credit programs in much of West Africa, including Mali, where naïve donors launch agricultural credit programs with few controls and few sanctions, then watch repayment rates go from 90-92% in the first year, to 78-83% in the second year, to 65-70% in the third year as serious borrowers finally realize they are the only ones who are repaying, before termination of the program. This is not a problem of access to credit; this is a problem of the structure of credit programs. Any time there is an incentive for the borrower to default, enough of them will, to make the entire program unsustainable. In this respect the insistence of banks to secure loans with collateral equal to the amount of the loan plus interest to be earned is simply a sound business response to political and market realities. They can be made to risk donor capital, but they don't want to risk their own capital - unless they are a quasi-public entity like BNDA.

The solution to this situation, while awaiting meaningful reform of Mali's commercial law code and the commercial court system, is to eliminate poor credit risks as much as possible, identify ways of providing collateral and loan guarantees that help new borrowers establish their credit,

and help credit programs build their capital base. The former can be done by increasing the likelihood that the investment for which credit is being sought in the first place is a good one. Business education, assistance with analysis of investments, preparation of business plans and helping banks develop a capacity for evaluating feasibility studies, can help do this. Building the capital base requires acquiring capital to lend, and monitoring loan repayment closely so as to be able to follow-up quickly on problem loans. Follow-up means, among other things, taking swift action to seize the collateral that secures the loan. High interest rates promote, rather than retard, the entire process by setting a high threshold for financial profitability and by providing a larger cushion of interest income for the inevitable failures that will result. For agricultural and rural lending programs, these rates should, necessarily, be much higher than for urban and merchandise trade lending programs. Both the risk inherent to the nature of agricultural investments, as well as the opportunity cost of capital in rural areas, are much higher.

In Mali, as in many African countries, the primary lesson to be learned by donors, credit programs and borrowers alike is the paramount importance of, and necessity for, program discipline. The single most serious impediment to sustainability of credit programs is poor repayment. This is a hard lesson for people concerned with lending goals, number of beneficiaries, amount of credit allocated or the amount of crops in storage to appreciate. For sustainability, loan growth should always be secondary to internal capital growth.

Other Factors Which Restrain Marketing of Cereals

These include many of the same issues restraining marketing of livestock: illicit road taxes, high transport costs, inadequate market price information from regional market centers, and extremely slow and cumbersome bank transfers of funds. The reader is referred to the discussion in the Annex A for details.

IV. PROGRAM FOR EXPANDING TRADE

Assist Trade Associations to Become Viable Forces for Market Development and Change

These are the same issues as for livestock.

Support the Evolution of Village Associations, Producer Enterprises and Cooperative Organizations into Apex Input Supply, Storage and Marketing Organizations

Mali now has a rich experience with developing village level cooperative structures for providing credit, acquiring and disseminating inputs, marketing outputs, in some cases even providing extension, health and education services to their populations. These structures have benefited from the best efforts of French, Canadian, Dutch, German, World Bank, USAID and NGO organizations committed to rural development and alleviating rural poverty. All are based on the assumption that empowerment, training and discipline provide most of what is needed to transform rural areas. Some have succeeded better than others. There is great merit in studying these structures in order to identify which types of structures work best, those characteristics that are associated with success, and to guide future efforts directed toward providing credit, inputs, storage, training and marketing directed at cereals as well as livestock production and marketing in Mali. The study should identify the characteristics of successful micro credit programs, the feasibility of providing a loan guarantee fund to qualifying MFIs and how that might be structured, and how MFI and producer associations can work together to finance crops in storage and to direct market cereals and livestock in both national and export markets. The same study should examine the ramifications of using credit guarantees to MFI as a way of directing resources to women, particularly women engaged in processing cereals or fattening small ruminants for export.

These village structures probably represent the broadest base possible for drawing the resources for, and spreading the benefits of, increased cereals production, storage and export, as well as increased livestock fattening and exports. They offer potential for assuring a source of finance for livestock feeding operations, especially those directed at small ruminants and operated by women. They can guarantee supplies of feed materials and reduce the amount of financing required by livestock feed mills to guarantee their raw material supplies. They can provide in-kind working capital for cereal and livestock exports that must meet specific compositional requirements. They can increase capital formation in rural areas by using food stores as collateral for short-term loans directed at feeding and marketing activities. Some of them can administer loan guarantees as well or better than BNDA, while using them to expand the stock of capital in rural areas where interest rates typically exceed 50-75%. There is no limit to what they can do, only in what we can imagine they can do. In poverty alleviation, small is beautiful.

Mali has the experience to reveal what works and what doesn't work when it comes to village level cooperative institutions. USAID should take advantage of this experience for its cereals and livestock export promotion program. In particular USAID should promote organization of village

groups into larger, market oriented Apex organizations that can raise capital and legally borrow money. This is a solution to the main problem underlying rural poverty, a dearth of capital. For this reason, this activity best fits under IR 3, though it will prove invaluable to production and marketing activities as well.

Developing Forward Sales Contracts Using Grain in Storage as Collateral

The issues of lack of access to credit are much the same for cereals as they are for livestock. One way of expanding credit for cereals storage and trading is by lending against grain in storage. This is a bit easier for a bank to do successfully on a large scale than it is for livestock - cereals don't die and they can be secured at a relatively low cost in relation to value. This type of financing actually appears more prevalent among village level cooperative groups and micro finance programs than for larger traders. There is plenty of room for expansion at both levels. One measure of the potential for expansion is the sharp fluctuation in cereals prices between harvest and the *soudure*. To the extent this difference exceeds storage costs at commercial bank interest rates, there is an incentive for traders to acquire more grain for storage and later sale or export. This is the reason for the chronic shortage of finance: a trader can always make more money if he can just get more capital.

Grain is storage is a much-underutilized source of capital for grain trade. If you stop and think about it, storage adds almost nothing to national output, except the cost of holding it for later consumption. Whether cereals are held at the farm level or the regional level, once produced, the cereal is there. The essential element is that it not be consumed until some later date. If traders wish to acquire the grain for storage they need capital to move the grain from the farmer to their own control, and capital to construct and maintain storage facilities. But if the farmer wishes to store the grain, he only needs to invest in storage facilities; he already owns the grain, the largest portion of the cost of storage. Obviously, then, to the extent grain can be stored by farmers, total financing requirements for storage will be considerably reduced. In addition, on-farm storage enables the farmer to earn the storage and price speculation premium, in addition to production income, on the grain he intends to sell. This has obvious implications for attainment of USAID's poverty alleviation goals.

Of course, most grain farmers already store grain on some scale or another. Typically they sell grain all season long to obtain the income they need for cash purchases. If they sell too much, they may have to buy it back later at a higher price. But the intent, generally, is to hold onto it as long as possible in order to earn as much of the storage and speculation premium as they can. This brings us back to the issue of capital formation in rural areas and the dearth of capital at the time of the first harvest. If farmers can obtain credit against that part of their harvest they intend to sell, they will be less inclined to sell it at harvest.

The devil will be in the details. The CARE DAD project had a good model for the 2001-2002 year. It provided a loan of 30% of the harvest value of rice placed in storage with the coop, with the balance to be paid to the farmer, less storage costs, when the grain is sold. The association earned the storage premium and the farmer earned the price speculation premium. At 30% of the value of grain placed in storage, micro-finance institutions can get into the picture. If the grain is

placed in storage with a producer group with a legal identity of its own, you then have an institution that can bulk up small lots into large lots that interest commercial traders, or which the associations can trade themselves.

Once producer groups have large amounts of grain in storage, they can engage in forward contracts with exporters, feed mills and wholesalers in nearby towns so that both entities can benefit from farm level storage. The producer will get the harvest sale price, the storage margin, plus a portion of the price speculation margin, and the feed mill, wholesaler or exporter would get the grain and the remaining portion of the price speculation margin.

This approach creates all sorts of interesting possibilities that respond to the needs of the export market. The contracts can provide a mechanism for establishing and enforcing quality standards for grain intended for export. They can provide cash payment from the trader or feed mill to the farmer at harvest time, or even before harvest time[5], to satisfy a farmer's immediate cash needs and restrain the drop in prices. They can provide liquidity to traders and feed mills that need additional operating capital for purchase of inputs, and they can provide a profitable, well-secured, high yielding investment for micro-finance institutions.

The amount of the initial payment on the contracts will be an important determinant of the success of the program. It must be low enough in relation to the potential gains and guarantees provided in the contract in order for buyers of the grain to risk entering into a contract, and high enough to make forgoing the remaining payment interesting to farmers. It will not be very successful where the difference between cereal prices at the harvest and the anticipated time of sale is not substantial, as may be the case with rice where market demand is very elastic at prices near import parity. In general, if the opportunity cost of capital in rural areas is 50-70%, we would expect that the amount to be gained by the farmer from forward contracting (and, therefore, delayed payment), would have to be around one third of the amount not taken at harvest, i.e. that much more on the sale price at contract delivery six months into the future than it would have been paid at harvest time[6].

Because most of these issues relate to financing in one way or another, this activity probably fits best under IR 3. There are a lot of issues to work out before forward contract sales for grain stored on farm will become a reality. Can ways be found to keep the grain on the farm or will it have to move into village level storage structures? What kind of security can be provided to MFIs to secure their providing financing against the grain in storage? How will losses be shared if grain in storage is stolen, destroyed, or lost in some other way? Many of these issues have already been dealt with by village associations, producer groups and MFI. The study of these institutions suggested earlier would provide answers for wider dissemination. Then the fun part

[5] Contracting before the harvest is known would introduce an element of risk for producers that would almost certainly not be wise at this stage in the development of Mali's agriculture.

[6] As an example, suppose that maize is 80 FCFA/kg at harvest and the farmer receives an advance payment of 30% of the harvest sale price (80*.3= 24 FCFA), either from the buyer or from a loan against the grain in storage, or, more likely, a combination of both. At an opportunity cost of capital of 60% (30% for 6 months), a farmer would need to get (80-24)*.3=16.8 FCFA more than the price at harvest, plus any interest charges due if part of the first payment were borrowed, to find the transaction attractive.

begins: fashioning a really innovative mechanism for providing direct links between producers and traders that does all of the following: reduce acute capital shortages in rural areas, contribute to self-sustaining capital formation in those same areas, increase farmer incomes, provide financing for wholesale and export traders, feed mills and whomever else, increase the availability of grain in urban markets, and lower cereals prices, thereby increasing real consumer incomes. Development doesn't get any better than this.

Reduce Transport Costs and Provide Support to Regional Activities

These also are the same issues as for livestock

Finance Issues

These are various issues that contribute directly to exports, but which fall more logically under IR 2.

- Encourage development of a credit bureau to track the credit history of individuals, producer groups, village associations and other entities accessing credit from formal sector and micro-finance institutions.

- Lobby for removal of interest rate ceilings on micro-finance institutions or for allowing them to add a risk premium in addition to the interest rate on all of their loans and for giving them more latitude in the kinds of loans they make.

- Provide loan guarantees to MFI who meet specific lending, repayment and financial management criteria in their lending operations. These should include lending targets for loans to women for fattening small ruminants, loans to women's groups for storing grain for sale under forward contracts with grain exporters and feed mills and separate targets for men's groups doing the same.

- Support the development and refinement of forward contracting mechanisms for use between producer and village groups and Apex organizations on the one hand, and grain and livestock exporters and feed mills on the other. The mechanisms should include provisions for advance payment to producers for the contract, a guaranteed final payment upon delivery, perhaps some mechanism for sharing in any price gains or losses beyond some minimum or maximum threshold at the time of delivery, establishment of quality standards for delivery, provisions for dealing with non-delivery by producers or non-completion of the purchase by the buyer. It may be necessary to provide for some type of umbrella structure that can provide credible guarantees of contract performance by its members. Eventually, though certainly not now, it may be possible to create an exchange for buying and selling these contracts.

Target Support toward Women Wherever Possible

As is the case with livestock, at the present time there appears to be little involvement of women

in large-scale trade and exports of cereals. Women are active in retail sales of cereals and in processing small quantities for sale in local markets. But few appear to have the financial means or the cultural background to become important direct players in coarse grain exports. Efforts to incorporate women in the program to expand agricultural exports will probably be more fruitful if they focus on production and marketing directed at export markets rather than on the export trade itself.

Although it varies by ethnic group, production and especially thrashing of coarse grains is largely the responsibility of women in Mali, even when the crop belongs to a male head of household. Control over sale depends on who is the proprietor of the filed on which the grain is produced. Grain produced on family fields that is surplus to household consumption needs is usually sold by women to purchase other food items for the household. Grain produced on fields that belong to individual household members is typically the property of the owner of the field and is sold for cash in the local market. Some of this grain belongs to women as well, though we found no data indicating how much. Suffice it to say that women are important economic operators in cereal production and marketing and will benefit substantially from efforts to improve either one.

In many situations women seem to have a more responsible attitude toward savings and credit than do men, especially when organized into separate structures. The practice of collectively contributing for the benefit of one member at a time seems, in most places, to be a female thing. If the study of producer groups and micro finance institutions described earlier in this annex bears out these impressions, then targeting women's groups for loan guarantees, quality based grain delivery contracts, forward sales of cereals and advance crop payments makes good economic as well as good gender sense. Income from such activities will accrue to women, while women become empowered to begin accumulating capital in an important way.

V. TECHNICAL ASSISTANCE REQUIRED

To implement this program USAID will need strong analysis of feed production and marketing. This industry is in its very early stages in Mali and will require a wide range of assistance over the medium term, including the use of appropriate technology, quality control and an understanding of the complex market for animal feed. The project will also have to deal with policy and institutional issues, including cotton seed pricing, the maize technical packages being disseminated by CMDT, OHVN and others, introduction of standard feed specifications, and legally enforceable labeling requirements. This advisor's overall responsibility will be to help create a feed industry that is economically viable and responsive to the needs of livestock and poultry producers.

In the early years of the program equal attention should be devoted to cereals marketing, particularly reducing and stabilizing maize prices through forward sales of maize and other grains to feed mills, grain traders and grain exporters, since a stable supply of inputs is critical for a dynamic feed industry. The organization and structure of successful producer and village groups should also be studied so as to develop an on-the-ground sense of what works and what doesn't with respect to village organizations in Mali, and why.

TABLE B-1: AREA, PRODUCTION AND YIELD FOR MAJOR GRAINS AND COTTON IN MALI, WITH RAINFALL FOR SELECTED TOWNS
1984/1985 - 2001/2002

Season	Millet	Sorghum	Rice	Maize	Fonio	Wheat/ Oats	Total Cereals	Cotton	All Coarse Grains
Area (ha)									
1984-85	909,571	387,182	165,176	89,310	44,936	850	1,597,025		1,386,063
1985-86	840,688	424,874	184,833	109,042	28,772	798	1,589,007		1,374,604
1986-87	821,877	417,692	190,597	128,984	22,668	1,498	1,583,316		1,368,553
1987-88	781,763	491,223	163,079	118,144	28,793	1,152	1,584,154		1,391,130
1988-89	1,195,898	679,114	231,262	142,902	31,986	738	2,281,900		2,017,914
1989-90	1,083,091	774,470	230,919	174,612	29,637	1,310	2,294,039		2,032,173
1990-91	1,213,367	808,719	196,631	169,958	47,647	1,530	2,437,852		2,192,044
1991-92	1,074,722	706,583	263,019	185,749	55,971	1,270	2,287,314		1,967,054
1992-93	1,060,515	933,834	233,194	191,563	31,232	898	2,451,236		2,185,912
1993-94	1,345,855	1,031,131	246,465	256,925	39,505	715	2,920,596		2,633,911
1994-95	1,403,831	976,610	284,003	284,208	54,476	1,628	3,004,756		2,664,649
1995-96	1,285,540	852,729	307,469	207,229	45,758	2,923	2,701,648		2,345,498
1996-97	935,655	541,185	327,806	185,664	24,391	1,607	2,016,308		1,662,504
1997-98	878,941	573,034	327,991	202,814	23,678	2,133	2,008,591	497650	1,654,789
1998-99	910,816	616,630	326,433	239,379	19,681	2,680	2,115,619	504427	1,766,825
1999-2000	932,307	733,036	325,106	426,301	44,059	3,496	2,464,305	482299	2,091,644
2000-01	1,078,624	674,678	352,739	161,053	25,045	2,640	2,294,779	227908	1,914,355
2001-02	1,142,388	702,478	465,898	260,658	42,241	3,706	2,617,369	532159	2,105,524
Production (mt)									2.6%
1984-85	506,521	369,818	109,354	101,440	24,535	1,351	1,113,019	144261	977,779
1985-86	871,312	477,108	213,841	140,066	20,488	1,444	1,724,259	175092	1,488,486
1986-87	805,763	464,565	225,138	213,423	17,242	1,013	1,727,144	201653	1,483,751
1987-88	693,526	513,176	236,568	178,609	15,589	1,425	1,638,893	198887	1,385,311
1988-89	999,901	672,429	287,797	214,519	20,184	1,115	2,195,945	249056	1,886,849
1989-90	841,793	730,836	337,749	225,393	18,929	1,710	2,156,410	230795	1,798,022
1990-91	737,007	531,433	282,366	196,579	21,768	2,066	1,771,219	276023	1,465,019
1991-92	889,896	770,044	454,349	256,775	40,506	2,540	2,414,110	272430	1,916,715
1992-93	582,296	602,254	410,018	192,530	20,898	1,256	1,809,252	319424	1,377,080
1993-94	708,062	776,879	427,609	283,373	29,735	2,210	2,227,868	240244	1,768,314
1994-95	897,592	746,218	469,127	322,492	19,271	2,650	2,457,350	293021	1,966,302
1995-96	706,666	711,644	476,090	266,136	22,179	6,150	2,188,865	405939	1,684,446
1996-97	738,857	540,645	627,405	294,183	14,992	3,159	2,219,241	452032	1,573,685
1997-98	641,088	559,583	575,745	343,357	15,116	2,720	2,137,609	522903	1,544,028
1998-99	813,615	600,389	717,856	392,972	16,393	6,681	2,547,906	518364	1,806,976
1999-2000	818,904	688,830	727,140	619,897	31,252	7,585	2,893,608	459123	2,127,631
2000-01	759,114	564,661	742,599	214,548	22,738	6,208	2,309,868	242726	1,538,323
2001-02	792,548	516,698	932,588	299,444	21,398	9,353	2,572,029	578000	1,608,690
Begin Per.	1984-87	1984-87	1985-87	1985-87	1985-87	1984-87	1984-87	1985-87	1.9%
Ending Per.	1999-2002							98-2000	Annual Rainfall (mm)
Gr. Rate	0.5%	2.0%	9.3%	3.4%	2.0%	12.8%	3.6%	7.6%	Mopti / Bamako / Sikasso
Yield (kg/ha)									
1984-85	557	955	662	1,136	546	1,589	697		334 /	/ 890
1985-86	1,036	1,123	1,157	1,285	712	1,810	1,085		452 /	/ 1161
1986-87	980	1,112	1,181	1,655	761	676	1,091		401 /	/ 1127
1987-88	887	1,045	1,451	1,512	541	1,237	1,035		345 /	/ 935
1988-89	836	990	1,244	1,501	631	1,511	962		378 /	/ 981
1989-90	777	944	1,463	1,291	639	1,305	940		414 /	/ 972
1990-91	607	657	1,436	1,157	457	1,350	727		465 / 1,102 / 977
1991-92	828	1,090	1,727	1,382	724	2,000	1,055		358 / 899 / 1280
1992-93	549	645	1,758	1,005	669	1,399	738		390 / 930 / 1378
1993-94	526	753	1,735	1,103	753	3,091	763		359 / 741 / 1109
1994-95	639	764	1,652	1,135	354	1,628	818		640 / 1,157 / 1224
1995-96	550	835	1,548	1,284	485	2,104	810		357 / 824 / 978
1996-97	790	999	1,914	1,584	615	1,966	1,101		514 / 768 / 882
1997-98	729	977	1,755	1,693	638	1,275	1,064	1,051	328 / 1,025 / 1103
1998-99	893	974	2,199	1,642	833	2,493	1,204	1,028	455 / 975 / 1422
1999-2000	878	940	2,237	1,454	709	2,170	1,174	952	573 / 1,143 / 1122
2000-01	704	837	2,105	1,332	908	2,352	1,007	1,065	414 / 792 /
2001-02	694	736	2,002	1,149	507	2,524	983	1,086	453 / 734 /
Gr. Rate	-0.8%	-1.6%	4.2%	-0.8%	-0.3%	3.7%	0.6%		

Source: Ministry of Rural Development, Planning and Statistics Unit, CD ROM; DNSI; Service Meteo

Mali Trade Development Program
Contract #PCE-I-812-98-00014-00
Final Report

Annex C

Export-driven Development in the Rice Sub-sector: Situation Analysis

CARANA
CORPORATION

Introduction

Advances in production and technology combined with a favorable regional demand situation have led to a comparative advantage for the marketing of Malian rice in the sub-region. There is thus basis for believing that the rice sub-sector can be turned into an export-driven engine of development for the Malian economy.

USAID, through its Increased Productivity and Incomes strategic objective is preparing to assist the Government of Mali to develop a trade expansion program. One of the goals of this program is to find solutions to policy and enterprise constraints to exploiting the favorable situation in the rice sub-sector. Activities geared to increasing rice exports, as well as those of other targeted commodities, will help Mali to maintain the momentum of economic reform that has provided the incentives which have led to continued production increases achieved in the rice sub-sector.

Role of Rice in the Malian Economy

Table 1 shows that Mali exports a variety of products in varying quantities to nearly all of the countries with which it shares borders. The table indicates that Senegal and Mauritania are the chief regional destinations for Malian rice.

The Malian rice sub-sector is highly diverse. There are at least 5 or 6 distinct production systems operating in Mali. However, it is the fully controlled irrigation system of the Office du Niger zone, which has been the basis for most of the production, increases in the last ten years and which offers the best potential for export expansion.

Table 1. Export Of Malian Agricultural Products to Regional Neighbors by %:

Cereals

	Cote d'Ivoire	Burkina Faso	Senegal	Mauritania	Niger	Others
Millet	6	36	32	9	10	7
Sorghum	4	51	28	12	5	-
Maize	63	7	4	-	-	26
Rice	11	-	53	36	-	-
Average	14	32	29	8	8	9

Fruits and Vegetables

	Cote d'Ivoire	Burkina Faso	Senegal	Others incl. Europe
Mangos	17	1	27	55
Green Beans	0	0	0	100
Onions	34	37	29	-
Potatoes	46	17	0	37
Average	24	14	14	48

Livestock

	Cote d'Ivoire	Burkina Faso	Senegal	Mauritania	Algeria
Cattle	83	12	4	1	0
Sheep	59	13	15	3	9
Goats	64	18	6	12	0
Poultry	97	2	1	0	0
Average	78	10	7	3	2

Source : Analyse du volume et des flux des échanges des produits alimentaires entre le Mali et ses voisins, IER/Ecofil, 2001

Comparative Advantage and Productivity.

The performance of the rice sub-sector over the last ten years has been impressive. Production has soared from 280,000 MT to 727,000 MT. Much of this gain has been due to rapid increases in the Office du Niger zone. The latter accounts for about 17% of rice land cultivated and 40% of total production. Yields of milled rice in the office du Niger are around four tons per hectare whereas yields in the rest of the country are less than two tons per hectare. Table 2 summarizes the contribution rice has made to GDP and value-added growth relative to other agriculture sub-sectors.

Table 2. Sub-sector Contribution to Real Value Added (Base 1987 - Mean 92-98)

	Rate of Growth (%)	**Impact on growth (%)**	**Contribution to Value Added (%)**
Food crops other than rice	3.3	0.8	51.8
Rice sector	12.7	0.8	2.7
Industrial agriculture other than cotton	-1.0	-0.1	7.8
Cotton sector	9.4	1.1	28.8
Livestock	1.6	0.5	4.2
Fisheries	1.4	0.0	1.7
Forestry, etc.	3.5	0.4	8.5
Total Agriculture	**3.6**	**-**	**100**

Source: CPS/MDR, 2000

This level of growth has been made possible through an application of the appropriate technology at the appropriate scale (input and equipment supply) combined with efforts to upgrade the efficacy and management of irrigation infrastructure rehabilitation and maintenance. USAID has made significant contributions to this process by working with the Office du Niger in the areas of cost containment, capacity building and agribusiness support services. Moreover, domestic resource cost analyses have shown that the productivity increases accompanying this production performance have made exports of Malian rice competitive in nearly all regional, West African markets.

Maintaining this rate of growth over the next ten years, however, will require significantly greater investment than in the past. Domestic consumption of rice is growing almost as fast as production. Indeed, Mali still experiences periodic deficits in overall cereals production. Official imports of cereals to Mali have exceeded exports by an average of 58,000 MT per year over the last six years, most of which has been rice. In many cases, these rice imports are part of a complicated regional flow of cereals in response to market signals. Imported rice is substituted for domestically produced rice exported to neighboring countries. Nevertheless, the demand for rice in neighboring countries in the region is enormous. Several of Mali's neighbors already import quantities of rice ranging from 180,000 MT to nearly 750,000 MT.

Table 3. Total Rice Imports of Mali's Regional Neighbors (MT)

	1998	1999	2000	2001	Avg.
Cote d'Ivoire	600,000	450,000	654,000	575,000	569,750
Senegal	700,000	502,000	863,000	900,000	741,250
Guinea	300,000	275,000	325,000	275,000	293,750
Ghana	125,000	186,000	211,000	210,000	183,000

Source: USDA/FAS

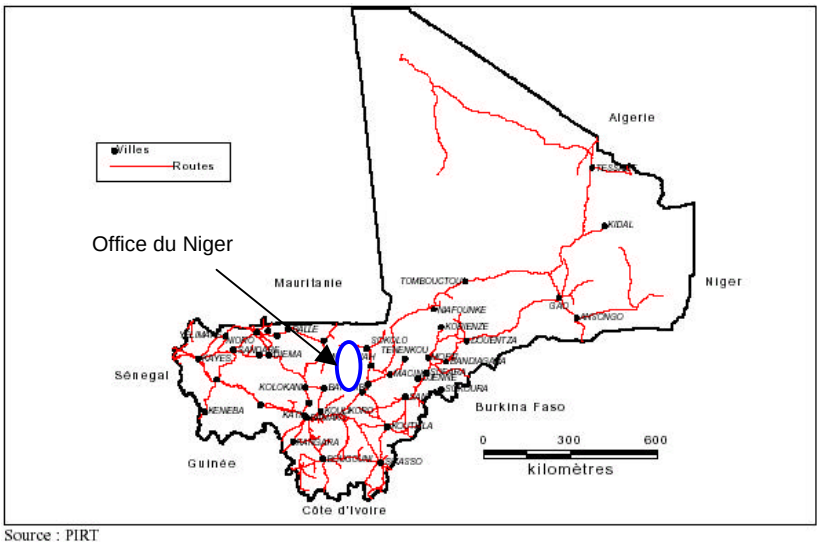
In order for Mali to exploit its comparative advantage in rice production and become a net exporter, it will probably need to double production in the ON again over the next ten years and maintain the rate of growth of rice production in other systems of production. The current rice sector development policy limits public investment in the ON to those costs involving extension and maintenance of the primary irrigation infrastructure. In the short term, the government does not have sufficient budgetary resources to pursue extensive investments and the donor community has fixed its priorities elsewhere. The current primary canal system is expected to be sufficient to permit the development of secondary and tertiary infrastructures that would double the productive area. Government and donors thus have no immediate plans to extend the primary irrigation infrastructures.

Moreover, it is national policy that the cost of development of secondary and tertiary infrastructures is to be paid by private investors. These costs are estimated to be around $3500/Ha.(Stryker & Coulibaly, 2001). Even assuming no or minimal public investment in the extension of the present primary irrigation infrastructure, the investments necessary to double production in the Office du Niger in the next ten years could be on the order of $15 – $20 million per year. Combined with consistent growth of around 4% per year in the rest of the sector, this would result in a national production of around 1.5 million tons of rice per year. Even assuming a normal population growth rate and an increasing rate of domestic rice consumption, at least 250,000 – 300,000 MT per year could then be available for export. Creating an environment that will provide the incentives for private sector investors to undertake this level of investment will require significant changes in a number of areas.

Production Support Services.

It will be necessary to maintain the momentum of management improvement and cost containment in the Office du Niger. The capacity building efforts currently deployed by USAID will have to be increased and expanded upon. The Agribusiness Program within the ON has made a beginning at encouraging private investment in irrigated agriculture. As part of an overall objective of strengthening the role of the private sector in agriculture, it worked with the Centre Agro-Entreprise and the principal micro-finance institution of the ON zone, FCRMD to promote private investment in irrigation. In three years loans have been made to 16 individuals to finance infrastructure development for

irrigation on 850 Ha. of land. Obviously, this is just a beginning, and falls well short of what would be necessary to achieve the levels of investment indicated above.



Source : PIRT

While transport costs in Mali are generally high, the national transport network represents certain advantage for rice produced in the Office du Niger. As the accompanying map demonstrates, Mali shares borders with seven countries and major roads and the national railroad offer relatively good access to the regional market, especially for rice from the ON. Other donors are assisting the government with road construction and repair. USAID can thus refrain from investments in major transport infrastructure rehabilitation, leaving it to other donor partners and concentrating on those areas where it has demonstrated manageable interests. It should, however, give strong support the privatization of the railroad link to Dakar, as this is the only practical means of bulk transport for exports in that direction.

Factors Constraining Increased Trade.

Development of a trade expansion program, especially in the rice sub-sector, will exacerbate the impact of a number of constraints that also cut across other sectors and affect IR-1 and IR 3 as well as other mission Strategic Objectives.

- Natural Resource Management, especially as it applies to land-use planning (IR-1). Land tenure forms, which provide the appropriate incentives to invest in irrigated production in the Office du Niger, will have to be developed and promoted.
- Democracy and Governance. The role of the private sector in accelerating the development of the economy is not well understood in Mali, much less its role in limiting corruption and lobbying for local issues.
- Decentralized Financial Services (IR-3). More appropriate financial mechanisms that can address the problems of raising capital for private investment in agricultural production, cross-border trade in agricultural products and value added activities (e.g. milling) will have to be developed.
- Information Technology. Timely access to price, as well as supply and demand information is crucial to successful export marketing.
- Poverty Reduction goals. Expansion of production and trade will present unprecedented opportunities for employment in the rice sub-sector, but will also create strains on the established social fabric in a country like Mali.

Expanding Regional Trade

The challenge of rapidly increasing investment in expanded production capacity (Rehabilitation of existing infrastructure) is beyond the manageable interests of USAID. This is a challenge that involves the local and foreign private sector investors, the Government of Mali and all of its donor partners. USAID can have a vital role to play in this process however through positioning itself to exercise a leading role in export expansion. To do this it needs to expand upon its acquired competence in market policy reform and technical assistance to private sector investors and operators who affect the downstream performance of the system. What is proposed is a Trade Development Program that is based on an enterprise and investment approach.

Enterprise Approach.

While there are opportunities for useful intervention all along the production/marketing chain, USAID has developed a comparative advantage vis-à-vis other donors in investing in capacity building downstream from production. Experience garnered from the CAE project and the Agribusiness Program in the Office du Niger has shown that Malian enterprises are increasingly looking to the broader regional markets for trade opportunities. The rapid development of the rice sub-sector and the prospects for further expansion has shown that there is potential to develop an export-led development dynamic for selected sectors of the Malian economy.

USAID seeks to develop a trade expansion program that will be able to exploit this potential in an opportunistic manner. This will involve a two-prong approach: working with Malian enterprises and associations involved in regional and international trade to improve their management and marketing performance (Business Development Services) and continuing the momentum of policy reform designed to enhance competition in the economy, not only in partnership with the Malian government, but on a regional level (Removing Restraints to Trade).

Business Development Services

USAID has considerable experience in providing assistance in Business Development Services (BDS), both to enterprises through the CAE project and to producer and trader associations through NGOs like CARE and CLUSA. The focus of BDS activities will not change under a trade development program except that they will take on a wider, regional implication.

The transformation of the Agribusiness Program within the Office du Niger into an Investment and Export Promotion Center will play a key role in providing effective business development services to increase rice exports. As was noted above, attracting the necessary investment resources from the private sector represents an enormous challenge. The agribusiness program will have to be considerably expanded and strengthened. It will have to work with banks, MFIs and the Société Malienne d'Investissements (SMI – a local capital management firm) on developing financing

instruments for investments in production capacity, processing, quality control and exports. The Investment and Export Promotion Center will need to adhere very strictly to a demand-driven approach for its services. Nevertheless, given the scope of the challenge to be addressed, the center should also be able to undertake promotional activities that will have an effect on demand creation.

Some of the more important areas in which business development services will have to be applied are the following:

- *Financial services* (accessing capital). Enterprises invariably cite financing as their principal constraint, while banks insist that few trade-oriented ventures are financed because of a lack of bankable projects. Indeed, most trade related financing involves imports. This is both because there are almost no export oriented financing facilities and because exporters typically operate in the informal sector, and thus have little experience in seeking bank financing. BDS can assist in this process by assisting enterprises to see financing as only a step in the capital formation process and by assisting banks to manage risk in loaning capital to export enterprises.
- *Management/marketing expertise*. Many small enterprises like those involved in trade in Mali experience critical management shortcomings. A number are family enterprises and many traders association members are semi-literate. Training and internal capacity building services will permit them to operate their businesses more efficiently and respond more quickly to opportunities as they present themselves in the regional market.
- *Technology/Quality control*. Quality issues become much more important when enterprises are responding to an export market. While the current small scale of milling operations has allowed producers to capture a larger share of the value-added, it may be inappropriate for levels implied in trade expansion. Consumer preferences in the urban coastal areas are markedly different than those in Mali. Moreover, responding to these quality expectations requires modifications in the handling of the product that also have implications on cost. As investments in large-scale rice production proceed, parallel investments in larger scale milling capacity will need to be made. Indeed, continued rapid growth in the rice sector aimed at exports and spearheaded by private investment will likely lead to a significant level of vertical integration among production, processing and marketing activities.

Assuring an Enabling Environment

Further activities will have to address removing restraints to trade through improving the policy environment for investment and export.

- *Informal sector issues*. A significant portion of the actual cross-border trade in cereals is done informally. The volume of these transactions is thought to be quite high, but they do not figure in national trade statistics. Harassment of traders and transporters by police and local authorities is pervasive in West

Africa. Besides slowing down the movement of goods from source to markets, these activities impose informal taxes that raise the cost of doing business and impact ultimately on the overall volume of trade. USAID has had some success in working with the government of Mali in reducing the importance of these internal barriers. However, exporters find these barriers even more difficult to deal with once they have crossed a national border. Addressing this problem will require a regional approach involving all the countries of the WAEMU zone and probably other donors.

- *Market information.* Mali has the most efficient market information system in the region. Traders agree that it generally delivers useful price and market information in a timely manner. A beginning has been made to reinforce the links among the various market information systems in West Africa through the PASIDMA project. It is absolutely necessary to continue to reinforce and integrate the capacities of these institutions at the regional level.
- *Fiscal and land use policies.* Although this constraint impacts agriculture and agricultural trade generally, it is most evident in its effect on expanding private investment in the Office du Niger. This will be treated as a separate section on private management of public infrastructures below. It also has consequences for activities developed under IR-1.
- *Regional integration.* Many of the regulatory, judicial and administrative changes that have accompanied the formation of WAEMU are unknown to exporters. Small enterprises, especially often lack access to information on the regulatory environment in which they must operate. The current situation in Cote d'Ivoire highlights the question of what forms of protection or recourse an enterprise can expect if his/her goods should be caught up in a situation of civil unrest. Efforts need to be made so that governments and regional organizations are able to diffuse this kind of information more effectively to enterprises engaged in cross-border trade.

Privatization of the Management of the ON

In addition to transforming its Agribusiness Program into an Investment and Export Promotion Center, efforts need to be made to increase the management efficiency and capacity of the Office du Niger itself.

Maintenance, rehabilitation and extension of primary irrigation infrastructure is a delegated responsibility of the Office du Niger and represents a social investment. There has been considerable experience in the United States with private management of public infrastructures. The irrigation districts in California and Texas are but two examples. This experience can be drawn upon and adapted to the conditions in Mali in order to initiate a privatized management structure for the Office du Niger. Putting in place a privatized management structure for the ON must be accompanied by the development of an appropriate fiscal power.

Large-scale investors, especially FDI, will not be interested in investing in irrigated agriculture in Mali unless more secure forms of land tenure can be assured in the

production areas of the Office du Niger. The ON must be able to offer private investors financial concessions and more secure (private title) forms of ownership of land before they can be expected to defray the costs of secondary and tertiary infrastructures for irrigated production. The Office must be able to offer potential investors the kinds of term-sensitive, non-bank financial services – bonds, regional money market financing, asset capital, etc. -- which will ultimately interest them in investing in irrigated agriculture in Mali. Moreover, an investor-friendly environment will have to be created. Foreign direct investors and joint ventures will expect to be granted tax and other fiscal exonerations running for periods of up to ten years in order to valorize their capital investments.

The crucial role of the Office du Niger in achieving an export-led development dynamic in the rice sub-sector highlights the cross linkages among the three Intermediate Results in the Increased Productivity and Incomes Strategic Objective (SO-9). Assisting the ON to acquire appropriate fiscal and land use planning capacity is a technical assistance activity that falls under the terms of IR-1. Establishment of an enabling environment and strengthening the capacity of SMEs and traders associations to engage in export enterprises is a focus of activities under IR-2. Financing mechanisms such as guarantees, extended repayment terms, etc., which will be necessary in attracting large-scale investment are activities foreseen under IR-3. We believe that the only way of assuring that these linkages are smoothly coordinated is through progressive management support designed to culminate in the privatization of ON management.

Illustrative Activities and Indicators.

USAID has demonstrated a manageable interest in policy reform and realignment, market expansion, agribusiness, private investment. These strengths can be applied to assisting Mali to continue production increases and the rehabilitation and maintenance of irrigation infrastructures in the rice sub-sector by increasing trade in rice per Intermediate Result 2. At the same time continued effort needs to be made to consolidate and expand the gains made in professionalizing the performance of private agribusinesses. Pursuing these goals through an enterprise approach will have important side benefits for the achievement of other Intermediate Results under the Productivity and Increased Incomes Strategic Objective.

Activities to be pursued under IR-2 are divided into two categories:

<u>Activities which improve the competitiveness of rice and other Malian agricultural products by improving the enabling environment through interface with other objectives of USAID/Mali and WARP</u>

Land use planning/land tenure reforms in the ON (IR-1);

Fiscal exonerations/tax rebates for FDI and local companies investing in productive capacity in the Office du Niger zone;

Reinforcing/privatizing the management capacity of the Office du Niger to enable it to better undertake the task of private management public infrastructures;

Development of appropriate financial services for both banks and MFIs which can be used by enterprises to increase their export activities (bond issues, capital funds, export guarantee funds, etc.), and work with the BCEAO to assure that the appropriate regulatory environment is in place to promote the use of these new products – IR-3;

Maintain the momentum of the policy reform dialog especially as it affects the easing of informal barriers to trade within the region (democracy and governance).

Technical Assistance to broaden the scope of Business Development Services to take advantages of opportunities for export of Malian rice and other products to the wider regional market.

Continue to provide BDS assistance to agribusiness enterprises engaged in export activities;

Professionalization/capacity-building for PS and trader associations, especially in the areas of regulatory rights and responsibilities in export transactions;

Strengthening/expanding Market information systems to give greater coverage of regional market situations;

Market development services;

An emphasis on taking advantage of opportunities for value added activities (Rice milling economies of scale, quality control) that will emerge as the momentum of export expansion increases;

Business planning that implicates financial services institutions at all levels in working with export-oriented enterprises;

Investment promotion services, including those directed at FDI;

Transformation of the Agribusiness Program in the Office du Niger into an Investment and Export Promotion Center.

Mali Trade Development Program
Contract #PCE-I-812-98-00014-00
Final Report

ANNEX D

ISSUES RELATED TO TRADE AND DEVELOPMENT

CARANA
CORPORATION

AGOA

Signed by President Clinton in 2000 and reaffirmed and expanded by President George Bush in 2002, the Africa Growth and Opportunity Act gives duty-free and quota free entry to the U.S. market for thousands of products from the region. Thirty-five countries, including Mali, are currently eligible under the Act.

It is important to note that export of textiles, yarn, and apparel falls under a special category in AGOA. The regulations concerning these products are somewhat complex and require country certification in the form of a *visa* granted by the U.S. customs authority. About one half of the AGOA eligible countries have been certified under the apparel provisions. In West Africa, only Senegal has secured the visa.

Among AGOA's development objectives is the promotion of regional economic integration, since most of the national markets of sub-Saharan Africa are extremely small. The textile and apparel provisions of AGOA offer a direct form of encouragement to regional collaboration, as after 2004 even the LDCs will no longer be allowed to source fabric or yarn from non-AGOA countries.

The trade response to AGOA has been less than hoped—especially from West Africa, where nearly all qualified exports have come from the hydrocarbon sector. Washington is meeting the challenge through a reinforcing of technical assistance in trade, and USAID is the lead agency in implementation of its programs. USAID's regional mission, the West African Regional Program (WARP), has primary responsibility for coordinating activities related to AGOA in the WAEMU and ECOWAS countries. The Trade for African Development (TRADE) activity, funded by USAID/AFR, puts considerable emphasis on the importance of galvanizing commerce under AGOA. The three Competitiveness Hubs, currently out to bid, and one of which will be located in Accra and managed by WARP, call for a full-time AGOA implementation advisor.

Mali has exported nothing so far under AGOA, but this is not for lack of essential information. WARP has sponsored or participated in several regional seminars related to AGOA directly or indirectly, and FSN staff from the bilateral Mission in Bamako, along with Malians from the public and private sectors, have attended these events. Encouraged by USAID and the U.S. Embassy, the Ministry of Commerce and Competitiveness has taken some measures, albeit timid, to raise awareness of AGOA among the business community.

It is uncertain that Mali will take advantage of the benefits of AGOA before the facility is ended in 2008. Nonetheless, the history of entrepreneurship is one of surprises and spontaneity, and the Strategic Economic Growth Team of the Mission should be prepared to encourage any substantive expression of interest in exporting qualified products to the U.S. Since the idea of commercial reciprocity is embedded in the Act, SEG should also be attentive to opportunities for the import of U.S.-made products.

Two products representing potential for export from Mali under AGOA are handicrafts and apparel. Most non-textile handicrafts already qualify for export; apparel would require a visa, which Mali does not have but could acquire in a few months if justification presented itself. Either of these options would, of course, also require substantial investment in the industries themselves, for neither handicrafts nor apparel are being produced in the quality, quantity, and consistency that U.S. importers would demand.

One indirect avenue through AGOA that might exist for Malian businesses is the export of Malian fiber, yarn, or textiles to a third country, such as Senegal or Mauritius, that would transform them into apparel for American consumption. The provision that allows for use of third-country textile from anywhere in the world will expire in 2004, when transshipment rules will be strictly enforced. After that, apparel producers benefiting from AGOA will have to source their fabric internally or from another AGOA-eligible country.

Even if access to its benefits appears remote at present for Mali, the SEG Team should make AGOA a component of its trade development program. WARP and the Competitiveness Hub will be able to respond to technical questions and will also be positioned to offer direct technical assistance to interested parties.

PRE-SHIPMENT INSPECTION

The World Bank and the IMF encouraged pre-shipment inspection in many developing countries during the 1980s and 1990s. It seemed an ideal solution to two common problems: under and over-invoicing of imports. Over-invoicing was a common practice among merchants wishing to move hard currency into foreign accounts, and its effect was seen as bleeding the reserves of central banks. Importers resorted to under-invoicing to lower the customs value of imports and thus diminish the duties and taxes paid on them. This practice cheated governments of legitimate revenue. Pre-shipment inspection was considered a means of putting valuation of imports into the hands of disinterested, generally incorruptible third parties, usually private firms from industrialized countries. Among the better known of these firms is the Swiss-based Société Générale de Surveillance – SGS.

The requirement for pre-shipment inspection is written into Mali's commercial code. Surprisingly, so is SGS, contracted to provide the service. All import shipments valued over FCFA 1,500,000—about US$2,300—must be inspected for quality and quantity. Mali's reason for continuing this service is to avoid under-invoicing on the part of local importers and the consequence of lost revenue for the government from duties and taxes. The cost of the service provided by SGS amounts to an estimated US$5 million per annum; the money for the contract is raised through a levy of 0.8% ad valorem on imports, collected by the Ministry of Commerce when the importer requests an import license (*demande de l'intention d'importer)*. If the GOM gains significantly more than US$5 million through revenues that would be lost without the service, the economic argument in its favor might seem persuasive.

USAID is concerned with pre-shipment inspection in West Africa for three reasons. First, the practice is becoming rapidly archaic within the multilateral trading system, and the World Customs Organization recommends against it. GATT and the WCO set the world standard on customs valuation of goods through the GATT Valuation Agreement (GVA). The GVA puts forth a system in which goods are valued based on their invoiced amount. As a system, it expedites trade and at the same time is not devoid of checks to curb fraud. But Mali and many of the other WAEMU countries are still applying the Brussels Valuation System, which gives broad leeway to customs agents to disagree with declared values—for legitimate and for self-serving reasons. Once a country has adopted the GVA and transactional valuation, pre-shipment inspection loses much of its justification. In Mali, the contract between the government and SGS is retarding implementation of the GVA.

A second reason for USAID's concern with pre-shipment inspection is that the service raises the cost of all inputs, including intermediate goods for manufacture and agricultural inputs. Raising the cost of intermediate goods is usually an economic bias against export competitiveness. USAID's third reason is that pre-shipment inspection out-sources capacity which the local customs services should possess in-house.

Laying all the responsibility for the valuation of goods in the hands of an external party dissuades customs agents from learning this aspect of the profession themselves. A customs authority with well-trained agents, normal checks against corruption, and access to product information could obtain results as good as or better than those gotten through pre-shipment inspection and could get them at less cost. This is the major argument that WARP will use, and it is one that USAID/Mali, through SEG, should echo in full *connaissance de cause*.

The economic argument in favor of pre-shipment inspection should be astutely examined. First of all, SEG may inquire about hard data supporting its justification. Is there any compelling study demonstrating that the revenues lost to the GOM from potential under-invoicing are actually much greater than the cost of the pre-shipment inspection contract? Second, one should challenge the need for 100% inspection of goods exceeding the FCFA threshold. Because Mali has a present bias in favor of pre-shipment inspection, one should propose a gradual diminishing of inspections. They could be diminished in two ways: by simple percentage and by eliminating them for proven low-risk importers.

Savings from pre-shipment inspection costs would be largely kept within Mali. A portion of the estimated $5 million that currently leaves the country each year to pay for the service would suffice to create and maintain the requisite capacity in Mali's customs authority. Because of the importance of the issue to trade integration, USAID/Mali should pay attention to it. Because pre-shipment inspection costs may have a direct effect on its beneficiaries, SEG should push the agenda of transaction valuation and the use of basic risk analysis tools to lessen the need for inspections and thus to allow a freer flow of goods through customs.

ESTABLISHING THE ENTERPRISE

The universe in which investment decisions are made for establishing businesses includes registration, land acquisition and site development, financing, taxation, and the judicial process around contract enforcement. Each of these areas complicates investment in Mali, but SEG will be most directly concerned with the aspect of business registration in its technical assistance to enterprise development.

Business registration typically involves two phases: incorporation and licensing. Sole proprietorships, the most basic and most common form of small enterprise, usually bypass the incorporation step. Foreign investment[1] rarely occurs in any form other than as an incorporated society of capital, to include limited liability partnerships.

Mali's commercial law is changing as it cedes to OHADA legislation. OHADA recognizes stock companies and limited partnerships, as well as several forms of full-liability partnerships and temporary interest groups. Mali's commercial law does not cover non-profit organizations (NGOs, associations) or liberal professional firms; these fall under the jurisdiction of the civil code.

The Chamber of Commerce and Industry of Mali (CCIM), along with its regional antennae, is the venue for registering a small business, including a sole proprietorship. The CCIM houses a *Centre de Formalités*, which is an alleged one-stop-shop for getting the business license. For unincorporated businesses, the CCIM delivers to the client a paper listing the following requirements:

- Birth certificate
- Police record
- Proof of nationality
- Proof of residence
- Payment of the *patente*
- Certificate requesting tax registration
- Stamp tax (FCFA 100)
- Payment of registration (FCFA 6500-9500)

Unfortunately, the paper is not exhaustive. Evidence of one's civil status, i.e., married or single, is usually required, and each administrative zone (*commune*) also exacts a contribution (*une perception*).

The *Centre* alleges that the business license (*registre de commerce*) is delivered within 72 hours of the request. The reality is said to be far longer, and some reports mention delays of weeks. The excuse normally given for the "exceptional" delays is that the requestor has not submitted all the paperwork required.

[1] In this context foreign investment does not refer to the establishment of small businesses by nationals of the region but to substantive investment on the part of nationals from Europe, America, Asia, or the non-OHADA countries of Africa.

The formal requirements for securing the business license cannot be judged excessive, and the costs are moderate, escalating for import/export firms, where the *patente* is FCFA 550,000. Since SEG will be supporting growth of small, formal enterprise, it should document several actual cases of business establishment, even—or especially—at the micro level. It will be important in these instances to ensure that the concerned party has obtained all available information from the CCIM and has submitted all documents required.

The CCIM also delivers the business license to companies, whether SARL, SURL, SA, or *groupement économique*. For them it requires the following documents and payments:

- Statutes of incorporation
- Certificate requesting tax registration
- Birth certificates for principals
- Police record for principals
- Registration fee (FCFA 15,000)

The investor, or his agent, will visit several other offices before and after the CCIM. Notaries typically charge FCFA 500,000 to draft the company papers, and they do not produce them overnight. Then the investor must visit either the Ministry of Industry or of Commerce, the Statistics Office, and the Tax Office. The business license can be delivered within fifteen days of completing the statutes of incorporation.

Foreign investors face the same procedures, but they must also register at the CNPI or at the Directorate of Commerce. Normally, a foreign investor will request an *agrément*, which confers various special benefits such as tax holidays and immediate repatriation of dividends, expatriate salaries, and the like. The response time from either office is 30 days. Under Malian law, foreign investors and Malians are treated equally. If that is indeed the reality (it conforms to the pillar of "national treatment" under the WTO), it only occurs after the investment has been approved. Unless a Malian owns 51% of a company—whether affiliate, subsidiary, or branch—the firm must receive prior approval to establish in the country.

Partly because of the areas for conflict between OHADA and Malian law,[2] partly because a fully liberal investment framework is still in progress, the investment climate in Mali is generally, but somewhat ambiguously, favorable. Foreign investors are reputed to have to surmount many administrative barriers, although not formidable obstacles, before receiving the approval to invest their money in Mali.

[2] One example is the article in Mali's investment code limiting investment benefits (exonerations) to manufacturing firms—an article in clear conflict with OHADA. Another occurs in Mali's commercial code article 351, in which the Minister of Finance has 20 days to approve or disapprove the transformation of a foreign company into a Malian company—a provision also voided under OHADA. Yet a third example is the OHADA provision that makes a business license issued in any of the sixteen countries valid in any of the others. This right is little known and less often respected.

The French exception certainly does not add evenness to the playing field for foreign investors. Under OHADA, which comprises those sixteen countries in West and Central Africa that use the CFA as their currency, a French juridical or physical person enjoys the same investment rights as nationals of the sixteen countries. This fact provides additional evidence, as if such were needed, that the liberalism of the investment framework is directly related to the freedom of capital flows. That freedom exists for Mali, but it is limited.

SEG may have occasion to encourage or assist specific instances of foreign investment interest. One can only think of the Office du Niger to realize that opportunities do exist, even though they may emerge from hitherto unsuspected corners of the planet. SEG's participation in the CNPI, its discussions around MALIPEX, its collaboration with the regional USAID offices, and its finance arm will all touch on issues of the most direct relevance to private capital formation through enterprise establishment, and especially on issues of primary concern to foreign direct investment.

Mali Trade Development Program
Contract #PCE-I-812-98-00014-00
Final Report

ANNEX E

TRAINING AND TECHNICAL ASSISTANCE FOR TRADE CAPACITY BUILDING

CARANA
CORPORATION

A core element of SEG's trade development program will be organizational strengthening in trade. SEG's clients will be individual traders, small enterprises, trade associations, and public offices. Training and technical assistance needs will vary from one group to another and according to the purpose of the intervention.

In all its technical assistance and training for improved exports and conditions for trade, SEG should specify the behavioral changes it seeks from each activity. Behavioral changes begin with the individual trainee and accumulate at the level of the organization, which may be a business, an association, or a ministerial department. The effectiveness of the training will bear a direct relationship to the clarity of its purpose. The quality of results obtained will bear a relationship to the quality and frequency of post-training assessments and follow-up.

The following three categories are illustrative of the kind of training or technical assistance program that might be designed for different beneficiaries.

Category 1: The Small Business

The small enterprise designated here is inexperienced in trading. Its owner or principals are literate but not necessarily well educated; their business may not boast a computer, but they are capable of getting access to the Internet and finding essential information. The training assumes that the business has all the basic management elements—accounting, hiring, ordering, etc.—in place.

- Customs procedures
- Export/import contracts
- Finding information on applicable duties
- Import and export licensing
- Market identification
- Negotiating
- Pricing
- Trade financing mechanisms

Category 2: The Trade Association

The trade association with which SEG will work will typically have a staff with experience in commerce, including both import and export operations. Collectively, they will already have at least sound basic knowledge of the training elements proposed for the incipient small business. They will need training for two main purposes: to assist their membership directly with information and procedures; to lobby, or advocate, with the government for desired changes or improvements. For both purposes, they will need understanding of issues that go beyond the ability to conduct successful export/import operations on an individual, or firm-level, basis.

- OHADA and trade
- Quality issues from consumer perspective
- Quality issues from technical perspective
- Relevant AGOA, Cotonou, ECOWAS, and WAEMU policies and regulations
- Taxes—legal and illicit
- Transport and delivery
- The Internet for trade-related information

Category 3: Public Offices; advanced NGOs

Public officials and NGO leaders are not required to be successful traders, nor should they perform advocacy services for special interests. What they do need is the knowledge to draft, evaluate, or promote policy and regulations in the best interest of society. They need to consider Mali's position in the multilateral trading system, and its commitments to the regional and global organizations in which it has, or may aspire to have, membership and voice. Typical areas in which they will require education are as follows:

- Mali's WTO commitments
- Relevant AGOA, Cotonou Convention, ECOWAS, and WAEMU policies and regulations
- OHADA and trade
- World Customs Organization and Mali
- Quality issues from a technical perspective (SPS restrictions)

- The fiscal system and trade
- Transport policy and liberalization
- Using the Internet for trade-related information
- Gender and poverty implications of trade

Mali Trade Development Program
Contract #PCE-I-812-98-00014-00
Final Report

ANNEX F

DONOR SUPPORT TO TRADE IN MALI

In developing its trade program, USAID/Mali must be aware of related activities supported by other donors. Donor programs change, and the following brief descriptions should be considered useful as indicative of areas of interest rather than as specific interventions. The USAID/Mali Mission personnel, especially the long-term FSN staff, are highly knowledgeable about the activities of the donor community and generally enjoy professional relationships with staff in the other agencies.

The brief descriptions below concern programs of direct relevance and evident importance to SEG's Intermediate Result in Trade. They are in no way exhaustive of donor programs of potential interest. Various donors, for example, fund micro-enterprise and micro-finance activities, and in some instances environmental programs may be of interest to the Trade IR. This annex does not include such activities.

France

French Cooperation is responsible for nearly one third of the bilateral aid flowing to Mali, and it is involved in virtually every sector. The role of France, moreover, in shaping the whole economic environment of Mali and the other WAEMU countries vastly exceeds the whole of its cooperative assistance, since essentially it is the Bank of France that controls the CFAF monetary system, benefiting from it one the one hand, conferring stability upon it on the other.[1]

The Agence Française de Développement) AFD) provides direct financial and technical support to most of the institutions SEG will interface with—the CCIM, APCAM, agricultural trade associations, and so forth. It finances numerous transportation infrastructure projects, but seems not to be involved directly in transportation policy. The AFD's involvement with the cotton sector is well known. Through its Programme d'Appui au Développement Institutionnel du Secteur Rurale (PDISR), France provides a wide range of support to agriculture and the rural sector. One should also be aware of its

[1] Anyone deeply interested in the structures underlying international commerce in the FCFA countries should seek insight into the way that the CFA currency is handled. Pegged to the Euro, as it formerly was to the French Franc, all international CFA transactions pass through the central bank of France—even though the CFA cannot be exchanged for hard currency either in France or elsewhere in Europe. The FCFA, therefore, is a soft currency with all the trappings of a fully convertible currency in the BCEAO region. This unique monetary system has numerous implications for trade.

Appui au programme décennal de développement de la justice, as well as its infrastructure support to the Office du Niger.

The French may be planning very significant support to customs in Mali, but this fact remains unconfirmed in the present report.

The World Bank

One third of the Bank's financing in Mali goes to water and rural development; another third is dedicated to infrastructure. Through its PAVCOPA project, the Bank collaborates with MDRE to enhance the marketing of agricultural products. It has promoted the export of non-traditional products to global markets—mangos, sesame, shea, and gum arabic. PAVCOPA works closely with USAID's CAE activity.

Through its PASAOP intervention, the Bank supports agronomic research, agricultural extension, and institutional capacity building in agriculture. The institutional component reaches out to producer organizations as well as to the Ministry.

The World Bank also intends to support the creation of an export promotion agency. SEG would be well advised to hold early discussions with the Bank regarding this project as well as regarding support to, or collaboration with, the CNPI.

UNDP

The UNDP is currently in a strategic planning phase for the decade. It completed a series of three studies on exports, globalization, and investment for Mali, work conducted in collaboration with the UNCTAD and the ITC. While the UNDP no longer provides direct financing to institutions, it does considerable capacity building. One of its primary beneficiaries in Mali is the CNPI. The UNDP also intends to support the creation of an export promotion agency. Among the several areas of discussion that SEG may want to hold with the UNDP are the CNPI, the planned export agency MALIPEX, and JITAP. JITAP is the Joint Integrated Technical Assistance Program sponsored by six agencies and often coordinated in country by the UNDP. It is technical assistance to the Least Developed Countries under the Integrated Framework of the WTO.

The EU

EU cooperative assistance is, for SEG, as interesting in its regional programs as in its Mali activities. The EU strongly supports WAEMU and continues to provide technical assistance and equipment to customs, including computers. Most of the EU's technical assistance to WAEMU is managed from Ouagadougou. The PACE project, also regional, is one of the largest of the ACP activities at US$100 million, and is intended to improve livestock for the export of meat to Europe. The EU is also active with rice production in Mali.

Canada

Canada is a significant bilateral donor in Mali. Most of its support to agriculture has been in the north. Canadian assistance has financed wheat production and micro-enterprise projects. It may begin assistance to customs, and SEG should become informed of Canada's intentions in this regard, for there will be room for dialogue, and maybe for collaboration.

Germany

GTZ has not traditionally been a major partner in the agriculture sector of Mali, even though Mali is its largest recipient of ODA funds in Africa. GTZ does some work in rehabilitation of irrigated areas, and it focuses on natural resources management and environmental issues in rural areas.

Netherlands

Dutch assistance has focused on agriculture research and reform in the area of coarse grains.

Mali Trade Development Program
Contract #PCE-I-812-98-00014-00
Final Report

Annex G

BIBLIOGRAPHY

Abbate, Francesco, ed. *Surmonter la marginalisation: l'impératif du Mali*. Bamako: UNDP/UNCTAD, 2001.

ATRIP, "Les perspectives d'investissement dans l'industrie textile au Mali." Bamako. 1999.

Barry, Abdoul, Salif Diarra and Daouda Diarra, "Promouvoir les Exportations de Riz Malien vers les Pays de la Sou-Region ", AIRD, Cambridge. 1998.

Booz Allen & Hamilton, *Diagnostic Assessment/Plan of Action on Customs Procedures*. Bamako. 2001.

Booz Allen & Hamilton, *Seminar on the Commitments under the WTO: TRIPS, TRIMS and GATS in West Africa*. Dakar. 2001.

Booz Allen & Hamilton, *Globalization, Trade and the World Trade Organization: a Capacity-Building Seminar*. Bamako. 2001.

CAE/USAID, *Textes Globaux, UEMOA*. Bamako. 2000.

Conseil, Yiriwa, "Etude pour la Promotion des Filieres Agro-Inndustrielles, Volume III: Analyse de l'Etat des Filieres des Produits Oleagineux", Centre Agro-Entreprise, Bamako. 2001.

Conseil, Yiriwa, "Etude pour la Promotion des Filières Agro-industrielles, Volume IV: Analyse de l'Etat des Filières des Fruits et Légumes", Centre Agro-Entreprise, Bamako. 2001.

Coulibaly, Massa. *L'impact du code communautaire d'investissements UEMOA sur le tissu économique du Mali*. Bamako: USAID/ATRIP, 2000.

de Troyes, Edouard, "Evaluation des possibilités de mise on place d'une filière de commercialisation de la viande malienne en Cote d'Ivoire", SODESI, Agence pour la Promotion des Filières Agricoles (APROFA), Bamako. 1997.

Diakitè, Lamissa, "Note sur les échanges des produits alimentaire du Mali", IER/ECOFIL.

Bamako. c2001.

Diallo, Aly. *Contraintes à l'investissement privé dans les zones non aménagées de l'Office du Niger et propositions de solutions*. Cambridge, MA: Associates for International Resources and Development, 1999.

Diarra, Alpha N'Thio, "L'Embouche et Valeur Ajoutée de l'Embouche au Mali", AIRD, Cambridge, 1997

FEWS, `Low Supplies Keep Grain Prices High', Mali Monthly Report, October 8, 2002.

European Commission, *Accord de partenariat ACP-CE signé à Cotonou le 23 juin 2000*. Brussels. 2000.

Government of Mali, Ministère de l'industrie, du commerce et des transports, "Rapport de mission de la délégation malienne au séminaire AGOA à Dakar." Bamako. 2002.

HORUS Enterprises/SERNES, `Etude d'un Mécanisme de Détermination du Prix du Coton Graine aux Producteurs', Rapport Provisoire, Primature, République du Mali. 2001.

Humpal, Don and Dressen, Robert. "Mali Equity Fund Feasibility Study." Bethesda, MD: Abt Associates, 2002.

IMF, "Mali: Selected Issues and Statistical Annexes," *Country Report No. 02/1*. Washington, D.C. 2002.

Integrated Framework, "Proposed Timetable for Integrated Framework Diagnostic Trade Integration Studies." Bamako, 2002.

Maiga, Tafalifi, Belco Cisse and Fana Coulibaly, "La Problématique de la Filière Betail-Viande au Mali", SADAOC Fondation, Mali. 2000.

Metzel, Jeffrey, Abou Doumbia, Lamissa Diakitè, N'Thio Alpha Diarra, "Prospects for Developing Malian Livestock Exports", AIRD/EAGER, Cambridge. 1997.

Nathan-MSI Group, "The Impact of the CET on the Competitiveness of Mali's Manufacturing Industry." 2001.

OECD, *Strengthening Trade Capacity for Development*. Paris. 2001.

Sankoro, Keita, and Zalila. "Développement et promotion du commerce extérieur du Mali." Bamako: UNDP and UNCTAD. 1998.

Tyner, Wally et al, *Mali Agricultural Sector Assessment*, Abt Associates. Bethesda, MD.

2002.

UNDP/UNCTAD, *Surmonter la marginalisation: l'impératif du Mali*. Bamako. 2001.

UNDP, "Consultation sectorielle sur le commerce." Bamako. 2001.

UNDP, "Rapport Général sur l'atelier de validation de l'étude sur la mondialisation, la libéralisation et le développement humain durable." Bamako. 2002.

UNDP and UNCTAD, *The Least Developed Countries Report: Escaping the Poverty Trap*. Geneva. 2002.

USAID, "United States Government Initiatives to Build Trade Capacity in Developing and Transition Countries." Washington. 2001.

USAID, *Guide to the New USAID Programming Policies*. Washington. 2001.

USAID/W, "Reducing Hunger Through Sustainable Agricultural Productivity and Natural Resource Management." (draft). 2002.

USAID/Africa Bureau, "Trade for African Development (TRADE)." 2002.

USAID/W, "Trade Initiative Implementation Paper." 2002.

USAID/USDA, *WAEMU WTO Seminar (Dakar, Senegal)*. Washington. 2001.

USTR and the Department of Commerce, *Maximizing the Benefits of AGOA in West Africa—a Seminar*. Washington. 2002.

USTR and USAID, *African Growth and Opportunity Act Implementation Guide*. Washington, DC. 2000.

WTO, *Report on the Seminar by the Integrated Framework Core Agencies*. Geneva. 2001.

WTO, *Trading into the Future*. Geneva. 2001.

Wyeth, Peter, "Livestock/Meat Subsector Update: Mid-1997", Washington State University. 1997.

Mali Trade Development Program
Contract #PCE-I-812-98-00014-00
Final Report

ANNEX H

PERSONS CONTACTED

USAID

Mr. Rolf Anderson, West African Regional Program
Mr. Amadou Camara, SEG Team, USAID/Bamako
Ms. CarleenE Dei, Director, West African Regional Program
Mr. Augustin Dembele, SEG Team, USAID/Bamako
Mr. Cheick Drame, SEG Team, USAID/Bamako
Mr. Sikoro Keita, Program Economist, USAID/Bamako
Mr. Dennis McCarthy, Leader, SEG Team, USAID/Bamako
Mr. Gaoussou Traore, SEG Team, USAID/Bamako
Mr. Ryan Washburn, West African Regional Program
Mr. Arthur Westneat, Private Sector Advisor, USAID/W
Ms. Pam White, Director, USAID/Bamako

GOM

Mr. Souleymane Berthé, CNPI
Mr. Bandougou Camara, DNAMR, MDRE
Mr. Mamadou Cisekou, OHADA Office, Chamber of Commerce
Mme. Ag Erless Oumou Coulibaly, CNPI
Mr. Ali Coulibaly, Director, Regional Integration Division, Office of the Prime Minister
Mr. Moussa Diallo, BNDA
Mr. Mossa Diarra, Director General, RECOMA
Mr. Mahamet Keita, Technical Advisor, MDRE
Dr. Maiga, Director, PDAM
Mme. Diamoto Ba Sangare, Director, Direction du Commerce et de la Concurrence
Mr. Moukta Traore, Centre des Formalités, Chamber of Commerce
Mr. Namory Traoré, Dep.Dir.Gen., CNPI

Other Donors

Mme. Mirka Mouwes, European Commission, Bamako
Mr. Geza Strammer, European Commission, Bamako
Mr. Alois. French Cooperation.
Mr. Keita Karounga, UNDP
Mme. Sangho. World Bank

Other

Mr. Cyril Achcar, Director of Administration, Group AMI
Mr. Gerard Achcar, H.E.C, Group AMI
Mr. Rene Alphonse, President, FEBEVIM
Mr. Moctar Boukenem, CAE
Mr. Bakary Camara, Director General, Gaspar Consult
Mr. Richard Cook, Livestock Specialist, CAE
Mr. Abdramane Coulibaly, General Director, OMBEVI
Mr. Dramane Coulibaly, CILSS, Ouagadougou
Mr. Martin Dagata, Consultant to USAID/AFR
Mr. Fafa Dambele, Livestock Farmer and Merchant, Segou
Mr. Niama Nango Dembele, Resident Coordinator, PASIDMA
Mr. Lamissa Diakite, Agricultural Economist, ECOFIL, Institute of Rural Economy
Dr. Diale, OMBEVI
Mr. Moussa Alassane Diallo, BNDA
Mr. Daouda Diarra, CAE
Mr. Salif Diarra, Coordinator, OMA
Ms Sarah Gavian, Abt Associates
Mr. Ouseman Haidara, Legal Counsel
Mr. Michael Johnson, IFPRI.
Mme. Hawa Kanakomo, Executive Secretary, CONOESAM
Mike Mailloux, Coordinator, CLUSA, Mali
Mr. Souleymane Nimaga, Vice-President, CONOESAM, General Secretary, ROESAO
Mr. William Noble, Regional Representative, AFRICARE
Mr. Harvey Schartup, Director, CAE
Mr. Seydou Sidibe, Technical Advisor Livestock Marketing, National Cooperative Business Association (CLUSA)
Mr. Amadou Sylla, Agricultural Processing Chief, CAE
Mr. Ouseman Thiam, Ex Secretary General, West African Enterprise Network
Mamadou Togola, FEWS Representative, Mali
Mr. Ahmadou Touré, Notary
Mr. Jean Michel Vigreux, Director, CARE International, Mali
Mr. Arthur Westneat, Private Sector Advisor, USAID, Africa Bureau
Mr. Mbaye Yade, CILSS, Bamako